

THE RELATIONSHIP BETWEEN THE PROPHET'S MOSQUE

AND ITS PHYSICAL ENVIRONMENT,

AL-MEDINA, SAUDI ARABIA

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PH.D. THESIS

DEPARTMENT OF ARCHITECTURE

UNIVERSITY OF EDINBURGH

March, 1989



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

TO MY PARENTS

DECLARATION

This thesis has been composed by myself and is my original work.

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ABSTRACT

Al-Medina, the second holy city of Islam, has been witnessing unprecedented growth during the last four decades, driven by both the improvement of the Saudi Arabian economy and by the sharp increase in the number of visiting pilgrims. The central area, in particular, where the Prophet's Mosque is located, has undergone profound physical change. The historical quarters surrounding the Mosque were cleared in order to provide additional prayer places for the increasing number of worshippers, and also to improve accessibility to the building. This together with the introduction of new alien urban elements such as high-rise buildings, large car parks and overhead bridges, resulted in the present contradiction between the Mosque and its surroundings.

This thesis examines the relationship between the Mosque and its surrounding physical environment, and the effect of these changes on the spirituality of the city. It consists of two main parts: the first deals with the development of the relationship between the Mosque and its surroundings since its first building till the present time, while the second part is devoted to the public perception of change. This involved carrying out two separate sample surveys, one for residents of Al-Medina and the other for visitors, to ascertain their attitudes towards the recent changes and to suggest how to recover the coherent and inspiring character of the Holy City.

ACKNOWLEDGEMENTS

Praise be to Allah, Lord of the worlds, by His will the accomplishment of this work is made possible; and may His blessing and peace be upon His Prophet Muhammed.

It is a pleasant duty to express my gratitude to many people. First and foremost, I thank my supervisor Professor C.B. Wilson, who generously gave of his time at every stage in the preparation of this thesis. His interest in the subject, scholarly guidance and enlightening comments are invaluable. Grateful thanks are also due to Mr. D. MacCrone of the Department of Sociology, University of Edinburgh, for his advice during the design and analysis of the surveys, and for reading the first draft of Part Two of the study and offering many constructive comments.

In Al-Medina I am indebted to many people and officials for their assistance in providing valuable information for this work. Of these, particular thanks are due to the Amirat for providing the necessary letters for recommendations; the Municipality and the office of the Consultant Ahmad Farid Mustaffa for their assistance in obtaining maps and other materials; Mr. Abdulqader Al-Sabbahy whose help was invaluable; the Department of Girls' Education, and the headmasters and staff of the Third, Seventh and Eighth Intermediate Schools for their assistance in carrying out the survey of residents; the National Organization of the Pilgrims' Guides, Pilgrimage Missions and the other organization and individuals who helped in carrying out the survey of visitors; and above all to the residents and visitors who took part in the surveys. I would also like to extend my thanks and appreciation to King Faisal University, whose scholarship made my stay at Edinburgh possible.

I am grateful to Miss M. Tod for assisting with English of an early draft of this thesis and to Mrs. T. Kirkwood for helping with the later stages. Thanks are also due to Mrs. M. Gibb for transforming the original draft into a skillfully typed text. My thanks are also extended to my colleagues in the Department of Architecture, University of Edinburgh.

My deep gratitude is due to all members of my family in Saudi Arabia, particularly my brothers Muhammad and Nassir, for their encouragement and support. And last but not least I am very grateful to my wife and children who provided the support I needed and shared with me the burdens and the joys of this research.

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SYSTEM OF TRANSLITERATION

The system of transliteration from Arabic used here is the one employed in the Encyclopaedia of Islam, Leiden, 1986:

Consonants

ا	ء (except when initial)	ز	z	ق	q
ب	b	س	s	ك	K
ت	t	ش	<u>sh</u>	ل	L
ث	<u>th</u>	ص	s	م	m
ج	<u>dj</u>	ذ	d	ن	n
ح	h	ر	r	ه	h
خ	<u>kh</u>	ز	z	و	w
د	<u>d</u>	ح	c	ي	y
ذ	<u>dh</u>	ج	<u>gh</u>		
ر	<u>r</u>	ف	f		

Long Vowels

آ	ā
و	ū
ي	ī

Short Vowels

ا	a
و	u
ي	i

Diphtongs

او	aw
اي	ay
يى	īyy (final form ī)
ئو	uww (final form ū)

- اَ a; at (construct state)
- ال (article), al- and 'I- (even before the anteno-palatals)

DATES

Both the hejira and gregonian calendars are used in this study. The hejira date, year, or century is written first followed by the gregonianequivalent with an oblique between.

GLOSSARY

The meaning of these Arabic words and expressions are usually explained when they first occur in the text.

<u>adhān</u>	The call to prayer.
<u>ahwāsh</u>	See <u>hwash</u> .
<u>Anṣār</u>	Auxiliaries; the Medinan followers of the Prophet Muḥammad who supported him after the <u>hidjrah</u> .
<u>aswāk</u>	See <u>sūk</u> .
<u>aṭām</u>	See <u>ʿutūm</u> .
<u>azika</u>	See <u>zukaḳ</u> .
<u>bāb</u>	(pl. <u>ʿbwāb</u>) Gate.
<u>ʿbwāb</u>	see <u>bāb</u> .
<u>dār</u>	(pl. <u>dūr</u>) House.
<u>fard</u>	Obligatory duty.
<u>ḥadīth</u>	(pl. <u>ʿḥādīth</u>) Saying and doing of the Prophet.
<u>ʿḥādīth</u>	See <u>ḥadīth</u> .
<u>ḥadj</u>	Pilgrimage, the visit to the holy places in and around Mecca to carry out prescribed rituals at a specific time of year.
<u>hidjrah</u>	The migration of Prophet Muḥammad from Mecca to Al-Medina, in 1/622.
<u>ḥamām</u>	Public bath.
<u>ḥarāt</u>	See <u>ḥārah</u> .
<u>ḥudjura</u>	(pl. <u>ḥudjurāt</u>) Room or chamber.
<u>ḥudjurāt</u>	See <u>ḥudjura</u> .
<u>hwash</u>	(pl. <u>ahwāsh</u>) A large courtyard surrounded by a group of houses with a gate, usually locked at night.
<u>imām</u>	The one who leads the congregational prayer.

<u>khandak</u>	Ditch.
<u>khutba</u>	Sermon.
<u>kibla</u>	Direction of Mecca.
<u>madrasa</u>	School.
<u>makṣūrah</u>	A chamber in the mosque for the <u>imām</u> .
<u>manākha</u>	Place where caravans alight.
<u>manāzil</u>	Independent settlements.
<u>mihrāb</u>	Niche.
<u>mirbad</u>	Place where dates are dried.
<u>Muhadjirūn</u>	The Meccan followers of the Prophet Muḥammed who migrated to Al-Medina.
<u>muṣalla</u>	An open air place, usually outside the town, used for the feast prayer.
<u>rwāshīn</u>	wooden latticed balconies.
<u>sirah</u>	Biography of the Prophet.
<u>sūq</u>	(pl. <u>aswāk</u>) Market place.
<u>sunā</u>	Desirable act.
<u>ʿumrah</u>	The visit to the Great Mosque of Mecca to carry out prescribed rituals.
<u>ʿyid</u>	Feast.
<u>zuḳāk</u>	(pl. <u>aziḳa</u>) lane, alley.
<u>zyārah</u>	The visit to the Prophet's Mosque, in Al-Medina.

CHAPTER ONE :

INTRODUCTION

Al-Medina is the second holy city of Islam, after Mecca. It is the place which offered refuge to the Prophet Muhammad after the hostility he and his early followers had encountered in Mecca. Here he built his Mosque which became the first religious, social and political centre of the Islamic Call. From this centre he continued to preach the new faith and established the Islamic state during the last ten years of his life.

Prior to the hidjrah (the migration of the Prophet from Mecca to Al-Medina, in 1/622) the existence of Al-Medina was principally due to agriculture and trade. After this the city gained in importance as a religious centre and for almost four decades was capital of the Islamic state. With the transfer of the centre of the caliphate to Kufa in 36/657 and then to Damascus in 40/661 the political role of the city started to diminish, but it retained its religious, agricultural and commercial importance. Since then these three functions of the city have dominated the form of its urban structure. Until quite recently the harmony and integrity of these functions were maintained in both the socio-economic and physical structure of the city.

During the last four decades the city has been witnessing unprecedented growth, driven both by the improvement of the Saudi Arabian economy and by the sharp increase in the number of pilgrims. In this comparatively short time the central area, where the Haram (the Prophet's Mosque) is located, has undergone great

physical changes. The historical quarters surrounding the Mosque were demolished in order to provide additional prayer places for the increasing population and the rapidly growing number of visitors to the city; and also to build new roads to improve the accessibility to the building and the central area. With these developments, new urban elements such as high-rise buildings in alien style, large car-parks and overhead bridges, which are unsightly and unsympathetic to the Mosque and the historical nature of the area, have been introduced. Together, these changes have resulted in a conflict between the Mosque and its surroundings, eventually seeming to undermine the spirituality of the environment.

1.1 AIMS AND SCOPE OF THE STUDY

The prime aim of this study is to examine the relationship between the Prophet's Mosque and its surrounding physical environment, and the effect of the recent changes on the spiritual and historical nature of the Prophet's City as a whole. It is hoped that this will furnish the basis for an understanding of the present inconsistency in the urban structure of the Holy City.

Such an understanding is becoming an urgent necessity if both the spiritual and physical demands of residents and visitors to the city are to be fulfilled. Both populations have a right to expect a coherent and inspiring environmental character in which to perform their religious duties in a proper manner, and at the same time they need the physical and social support which enable them to do so and to satisfy their other living requirements.

In spite of the abundant literature on the Mosque and the City of the Prophet, these issues seem to have been neglected. Earlier writers contented themselves with citing mainly historical events which took place in the city, or describing and naming the wadis and mountains of the region. Other studies have focused on the historical development of the Mosque while a few have attempted to deal with the urban evolution of the city. But no attempt has yet been made to relate these together. Even in modern works the Mosque and the city are studied separately.

Recently, some urban planning reports have been produced by various private consultants for the municipality of Al-Medina. These documents have often been outdated by the time they are published, and largely ignored until another firm has been commissioned to prepare a new study. Such studies have mainly concentrated on particular aspects of the city, such as transport and housing. Conservation and the revival of the traditional character of the city, however, has rarely been addressed and even on such occasions when recommendations about these have been made they are never put into practice. Public participation in preparing these plans had never been considered. Although surveys in connection with the studies are usually carried out they are confined to broad demographic facts about the population, such as age, sex, occupation, etc. People's opinions regarding the environment in which they live have ^{been} given no attention.

Above all, studies on the development of the city have so far been characterized by the lack of a comprehensive approach to the problems of the area. For example, at the present time the design and construction of the extension of the Mosque is given to

one firm, the study for the development of the area around it is being carried out by another company, while the planning of the rest of the city is undertaken by yet another private organization, with little co- ordination between the three.

The objectives of the research contained in this thesis include the following:

- a) To study the development of the relationship between the Prophet's Mosque and its surroundings from its first building in 1/662 until today, with special emphasis on the period after 1370/1950, during which the area has undergone great social and economical changes that resulted in the present conflicts in the built environments.
- b) To examine the effect of these recent changes on the spiritual and historical character of the area through sample surveys of residents and visitors to the city.

1.2 THE THESIS STRUCTURE

Based on these aims and objectives, the study consists of two main parts and concluding chapter in addition to the present chapter which provides a general introduction.

Part One deals with the evolution of the relationship between the Prophet's Mosque and its surrounding physical environment and contains three chapters (Chapters 2, 3 and 4).

Chapter 2 examines the development before the Saudi era (1344/1926), which can be characterized as a gradual and continuous process.

Chapter 3 covers the development which took place during the Saudi

period and which has resulted in the present conflict between the Mosque and its physical environment, whilst Chapter 4 presents a description of the present condition of the city in general.

Because the physical development of an urban setting and the relationship between its elements are usually dependent upon socio-cultural, political and economic, as well as technological factors, such agents will be dealt with throughout this part of the study. They furnish the basis for an understanding of, on the one hand the connection between the expansion of the area of the Mosque and the growth of the number of inhabitants of and visitors to the city; and on the other the impact of the physical development of the Mosque and the city upon one another.

Part Two is devoted to the study of the public perception of change and its effect on the city spiritually. This involved carrying out two separate sample surveys, one for residents of AL-Medina and the other for visitors, to ascertain their attitudes towards these issues. The surveys are dealt with in chapters 5 to 9. Chapter 5 describes the methodology of the surveys. Chapter 6 is assigned to a detailed analysis of the results of the survey of residents and Chapter 7 to that of visitors. Chapter 8 presents a critical discussion of the methodologies adopted in the surveys, while Chapter 9 summarizes the findings of the surveys and discusses their implications for the future planning of the city.

Finally, Chapter 10 is devoted to general conclusions and implications of the results of the whole study for planning policy and building design in AL-Medina. Also in this chapter, areas where further research is required are identified. As far as AL-Medina is concerned, it is hoped that this study, if put into

practice, will contribute towards recovering the coherent and inspiring character of the Holy City. In broader terms, it is hoped that the research may contribute to a better understanding of the sensitive nature of historical cities, particularly those of religious significance, and the way they should be dealt with.

1.3 SOME ASPECTS OF THE GEOGRAPHY OF AL-MEDINA

Al-Medina is situated in the Western Region of Saudi Arabia in latitude 24° 28' North and longitude 39° 36' East. It is about 150 kilometres east of the Red Sea and 360 kilometres north of the Holy City of Mecca. In early times, the city developed as an important transport centre in Arabia, being located on the ancient trans-Arabian caravan route that connected Syria with Southern Arabia. Today, it is on the cross-roads between Syria, Jordan and the northern part of Saudi Arabia; the fertile Kasseim area in the east; Yanbu in the west; and Mecca, Jeddah and the Southern part of the Arabian peninsula (Fig. 1.1).

The city developed from an oasis on a plain bounded by mountains and lava flows sloping very gently downwards towards the north. Most of the plain lies at an altitude of between 600-605 metres, rising to about 620 metres in the south and decreasing to 598 metres in the north (Fig. 1.2). The mountains and lava flows contributed towards the defence of the city in early times, and they probably influenced its original siting. Today, however, they play an important role in controlling the direction of the city's growth [1].

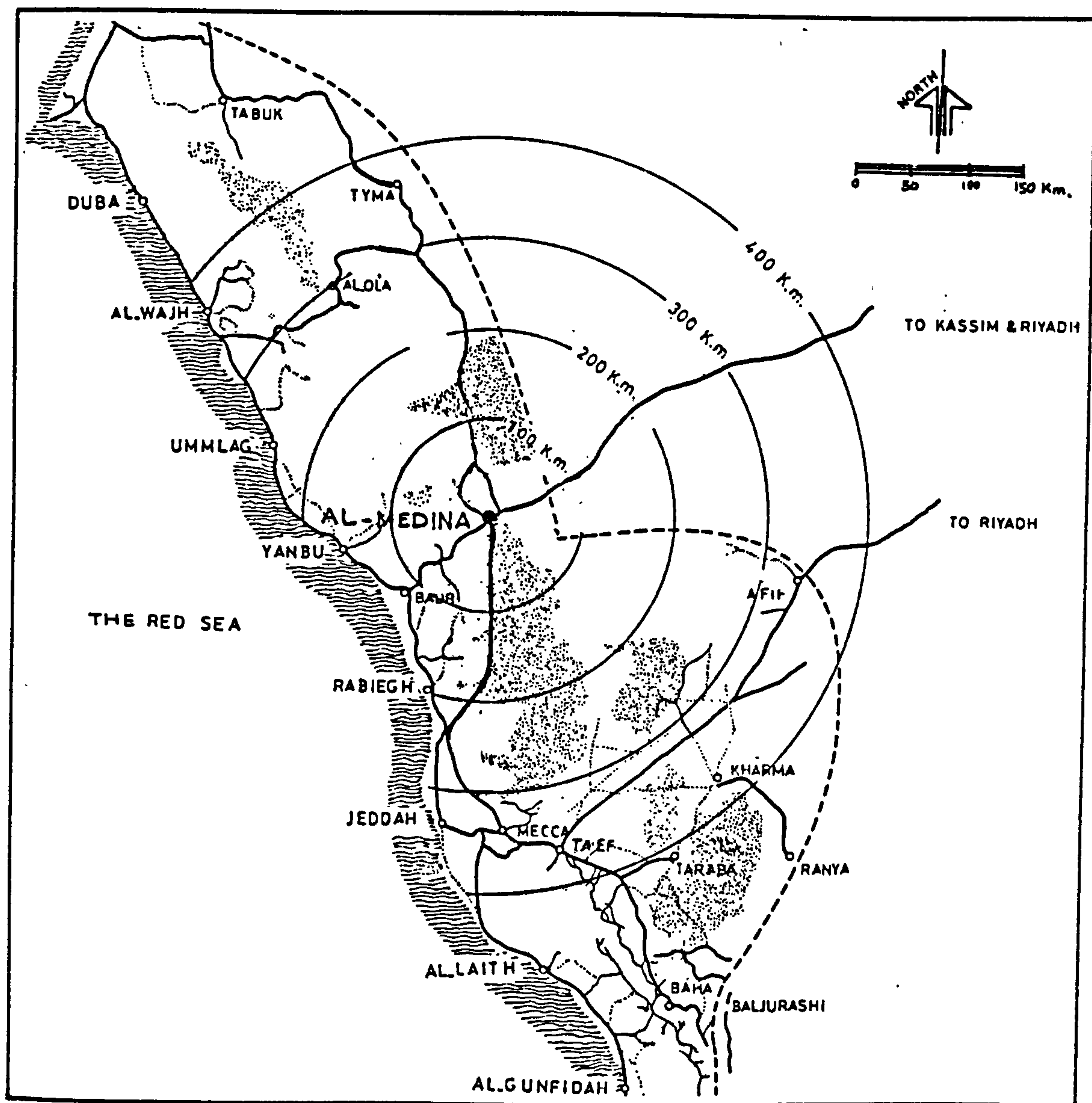
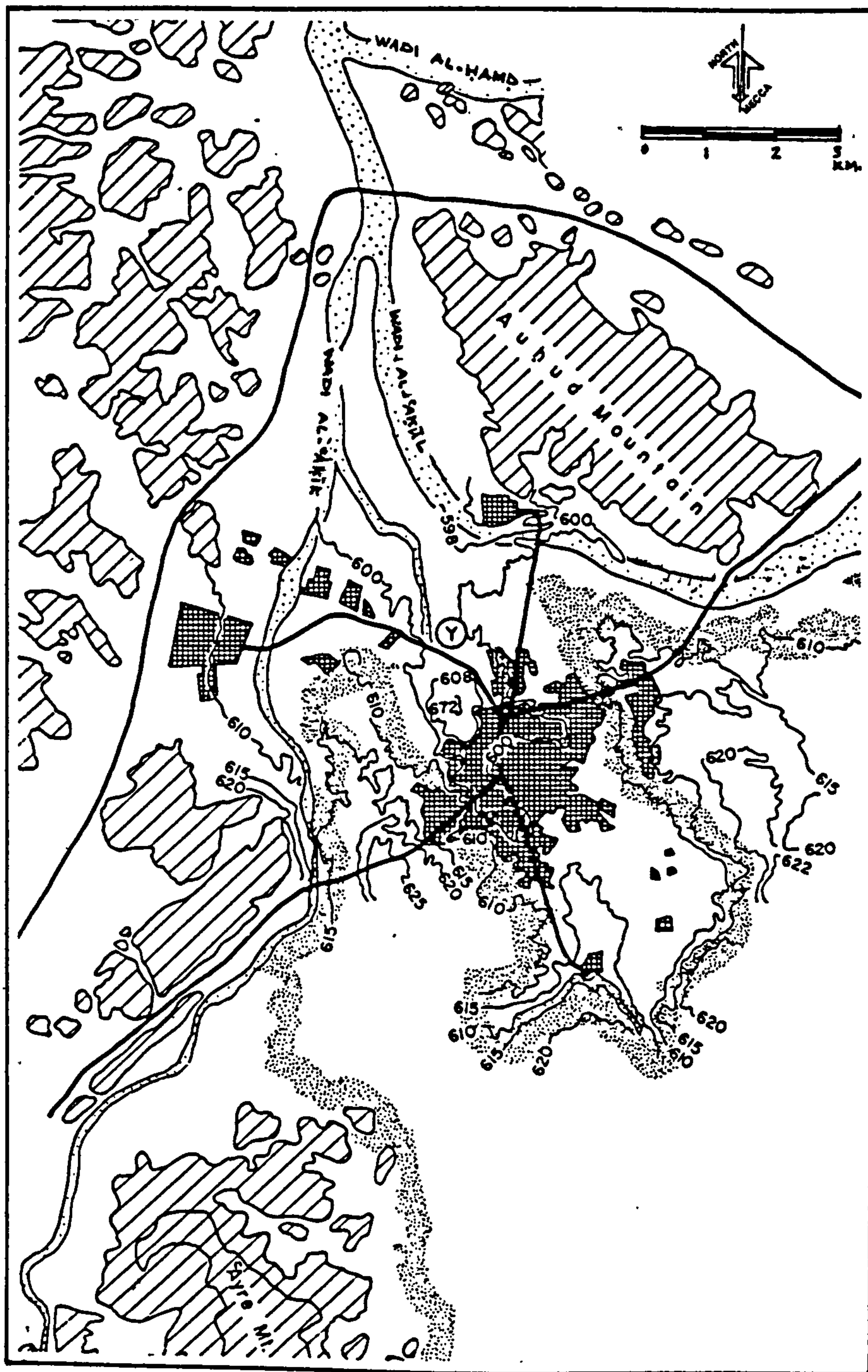


Fig. 1.1 LOCATION OF AL-MEDINA

Source: GACDAR (Group of Arab Consultants for Development and Reconstruction), Project No. 202, Ministry of Municipal and Rural Affairs, Riyadh, Report No. 4, 1978, p.3.









-  Mountains
-  Limit of Lava Flow
-  Built-up Area
-  Wadi
-  Contours in Metres
-  Main Roads

Fig. 1.2 Physical setting of Al-Medina

Source: Makki, M.S., Medina, Saudi Arabia a geographic analysis of the city and region, Avebury, England, 1982, p.5.

The area is crossed by two main wadis: al-^ʿAkūl, in the north east of the city and al-^ʿAkīk, in the west. These water-courses come from the eastern and western areas of lava and flow to the north, where they combine together and then merge with Wadi al-Ḥamad which takes a westerly course to the coast of the Red Sea (Fig. 1.2). Although they are dry, except after rain, they keep the level of the subterranean water fairly high, particularly as a result of the construction of dams, which have been known in the area since ancient times. It is reported that in the reign of the Caliph ^ʿUthmān (24/644-36/656) a dam was built to protect the city against the threats of floods [2]. However, the origin of dam construction in the area might go further back in history as Al-Medina was well known for agriculture and its plentiful supply of water; also the area had connections with Yemen where dams were widely used in early times. One such dam was that of Mā^ʿrib which is said to have burst in A.D. 450 after the great flood that resulted in the emigration of the Arabic tribes of Al-Aws and al-Khazradj to Al-Medina [3].

The soil is very fertile[†], particularly in the south. Generally, it consists of salty sand, lime and loamy clay. Date-palms flourish exceedingly well; also other fruits such as oranges, lemons, pomegranates, figs and grapes; and cereals. Farmland used to cover much of the plain and penetrated to the heart of the city. However, rapid modernisation and urban sprawl during the last three decades have brought farming disastrously close to an end, specially within the built-up area [4].

As to climate, Al-Medina lies in a tropical area of high summer and much lower winter temperatures. The average maximum

temperature during the period between May and September is about 30°C. The maximum daily temperature reaches 46° and occasionally even higher. The cold period lasts from December to February with the average minimum temperature of about 15°C in the month of January. Seomtimes, the lowest temperatures are recorded in February, as was the case in 1968 when it dropped to 5°C at night. There are wide variations between day and night temperatures. The night is relatively cold, even in the summer time, with a difference of as much as 13°C.

Relative humidity is very low, particularly in the summer, with an annual average of about 22%. Rainfall fluctuates from one year to another. For example the total rainfall in 1971 was 104 millimetres, whereas in 1973 it was only 0.7 of a millimetre. Rain sometimes comes suddenly, and short periods of intensive rainfall occasionally cause floods and damage in the area, such as in March 1960 when the rainfall in two days reached 45 millimetres. Such rainfall, which is usually accompanied by thunderstorms, is caused by atmospheric depressions in the east of the Mediterranean.

The prevailing wind direction is mainly from the west during March to July, and from the east during November to February. The wind speed is fairly uniform throughout the year with the monthly average varying between 5 and 8 knots (2.5 and 4.0 metres/second) [5].

The effect of climate on the development of the old city of Al-Medina was obvious, with its compact form minimising the area that was exposed directly to the sun (only top roofs and small parts of side walls of buildings). In addition, narrow streets guarantee shade for most of the day, enabling people to walk comfortably in

the long summer season. The protection against the burning rays of the sun goes even further with many of the streets completely covered, and only small openings left for admitting light. The windows of houses were either kept very small or provided with rwāshīn (wooden screens) in order to control the penetration of the sun's rays. In order to provide insulation from the extremes of heat and cold, the walls of buildings were often made as thick as 50 cm.

In the new developments, however, no attention is given to the climate. Concrete buildings are exposed to the solar radiation from all sides. With their large glass windows, these structures act like greenhouses in building up heat, which becomes unbearable at times when there is a fault in the electricity supply or in the air-conditioning units. In addition, expansion of the urban area into agricultural land and the construction of wide modern streets, have increased the surfaces available for absorbing heat. This not only makes walking at noon, in summer, extremely uncomfortable but also in the evening when the large asphalt and concrete surfaces start to re-radiate the heat back into the environment.

1.4 THE HADJ AND ZYĀRAH

In the Arabic language the word hadj (pilgrimage) has several meanings, however the intention to visit a venerated place or person has become the most prevalent one. In the Islamic literature the word denotes the visit to the holy places in and around Mecca to carry out prescribed rituals at a specific time of

the year [6]. The people who undertake those rituals are called ḥudjādī (pilgrims). Thus the use of the word "pilgrims" in this study will be restricted to those who are in the holy places principally for the purpose of the ḥadī, regardless of whether they are in Mecca or Al-Medina.

The ḥadī to Mecca is traced back by Arabic historians to very ancient times. It dates back to the rebuilding of the Ka'ba at Mecca by the Prophet Ibrāhīm (Abraham) after the global deluge at the time of the Prophet Nūah (Noah), which is said to have taken place in the latter years of the second millennium B.C. [7]. The ḥadī seems to have continued since the time of Ibrāhīm, though through the centuries pagan and idolatrous practices were introduced to it.

The Prophet Muḥammad, who found his contemporaries observing the ḥadī, confirmed the ritual and fought for it to be performed in worship of the One God, as was first decreed upon Ibrāhīm. It became a fard (obligatory duty) on every Muslim man or woman who has reached the age of puberty, and who is free and is of sound mind, to perform the ḥadī once in his or her life time, provided that they are able to do so. Ability is defined as possessing the necessary funds for the journey and for subsistence of the pilgrim's own family during his absence, and being physically fit for undertaking the journey [8].

Some of the many verses in the Holy Koran in this connection read:

"The first House (of worship)
Appointed for men
Was that at Bakka (Mecca):
Full of blessing
And of guidance
For all kinds of beings.

In it are signs
 Manifested; (for example),
 The Station of Abraham;
 Whoever enters it
 Attains security;
 Pilgrimage thereto is a duty
 Men owe to God, -
 Those who can afford
 The journey; but if any
 Deny faith, God stands not
 In need of any of His creatures" [9].

In addition the ḥaḍj is one of the five pillars of Islam, as denoted by the saying of the prophet:

"Islam is founded on five (pillars): witnessing that there is no god but Allah and that Muḥammad is the Messenger of Allah, keeping prayers, alms-giving (Zakah), fasting (the month of) Ramḍān and performing the ḥaḍj if able to" [10].

The ḥaḍj ritual was enjoined in the sixth, some say ninth or tenth, year after the Hidjrah (in 1/622) [11]. It takes place on the same date of the lunar calendar, between the eighth and the twelfth of the month to which it gives its name Dhū al-Ḥidja (the twelfth month of the Hejira calendar). The pilgrimage falls each year ten or eleven days earlier than the preceding solar year and thus runs through the whole cycle of the seasons in 32 to 33 years [12]. Many of the pilgrimage rituals need to be performed in certain places and at specific times and in a specific order. The rituals include, for example iḥrām (putting on the sacred garment), ṭawāf (walking around the Ka'ba), sa'y (walking between Ṣafa and Marwa, two small hills near the Ka'ba about 400 metres apart), staying on the 9th of Dhū al-Ḥidja in 'Arafāt (25 Kilometres^e east of Mecca), visiting Muzdalifa (15 kilometres east of Mecca), and

spending the three days between the tenth and the twelfth of Dhū al-Hidja in Mina (12 Kilometres east of Mecca), in which three pillars symbolizing the devil are stoned [13].

The ʿumra is a visit to the Great Mosque of Mecca, in a special manner, comprising the rituals of ihrām, ṭawāf and saʿy. It is a suna (desirable act) according to some juridical schools, while some others consider it as an obligatory duty. This ritual can be performed before or after ḥadj or at any other time of the year [14]. However, it is highly desirable in the month of Ramḍān for the saying of the Prophet: "A ʿumra in Ramḍān is an equivalent (in reward) to a ḥadj" [15].

The zyārah (visit) to the Prophet's Mosque at Al-Medina is a suna according to all the juridical schools. It is not part of the ḥadj and can be made at any time, before or after the ḥadj or may even be excluded since it is not an obligatory duty. However, for convenience many people, particularly those from outside the region, undertake the ritual in conjunction with the ḥadj [16].

The Prophet is reported to have said:

"A prayer in this Mosque of mine holds more good than a thousand prayers in any other, excepting the al-Masḍjīd al-Ḥarām (the Great Mosque of Mecca), and a prayer in the al-Masḍjīd al-Ḥarām holds more good than a hundred thousand prayers in any others" [17].

He also said:

"No travelling (meaning undertaking a sacred journey) except for three mosques: the al-Masḍjīd al-Ḥarām, this Mosque of mine and al-Aḳsa Mosque (at Jerusalem)" [18].

Because of this ḥadīth (saying of the Prophet) and also the Prophet warning against regarding his grave as a holy shrine, the

visitor to Al-Medina should be clear that the Mosque is the subject of the zyārah, not the tomb of the Prophet as some people think [19]. It should be mentioned here that the Prophet as well as his first two caliphs, Abū Bakr and ʿUmar b. al-Khaṭāb were buried in the room of ʿĀʾisha (one of the Prophet's wives) which at that time was outside the Mosque proper. It was incorporated within the enclosure of the Mosque in the enlargement of the building by al-Walīd b. ʿAbdulmalik in 88/797, as will be shown in the next chapter.

Apart from praying in the Prophet's Mosque the zyārah, unlike the ḥajj or ʿumrah, does not involve specific rituals, although it has become traditional for people to visit certain places. After praying in the Mosque, visitors may follow the example of ʿAbdullah b. ʿUmar b. al-Khaṭāb (one of the companions of the Prophet). It is reported that when he arrived back at Al-Medina from his travels, he used to approach the burial place of the Prophet and the two first Caliphs and greet the Prophet saying: "Peace be upon You, Messenger of God" and he repeated the same greeting to Abū Bakr and his father, ʿUmar b. al-Khaṭāb [20].

People also visit the Mosque of Kubāʾ, the first mosque that the Prophet founded in Al-Medina. In regards to this Mosque the Prophet is reported to have said:

"He who purified (performed the ablution) himself in his house and then went to the Mosque of Kubāʾ and prayed in it, he would have a reward equivalent to that of a ʿumrah" [21].

In addition, many people, particularly pilgrims, visit other

historical mosques and sites in Al-Medina during their stay in the city. For example, there is the Ḳiblatīn Mosque where it is reported that the Prophet was ordered by God in 2/624 to change the direction to which he faced whilst praying, from Jerusalem to the Ka^cba [22]. Also there is the al-Fataḥ Mosque, one of the Mosques which makes up a group known as the Seven Mosques which were built in the site of the battle of al-Aḥzāb (also called the battle of the Khandak), which took place in 5/627 [22], and the cemetery of the al-Bakya^c where many of the Prophet's companions are buried (Fig. 4.2) [24].

Since the zyārah is optional, there is no specified length of time for which the visitor has to stay in Al-Medina. However, many people, particularly pilgrims, are keen to offer forty consecutive Daily Prayers in the Haram and this takes eight days (five prayers a day). It is said that the Prophet mentioned that such prayers would ensure one's salvation from the fire, penalty and hypocrisy [25].

Finally, the city of Al-Medina as a whole was designated by the Prophet as a sacred territory. For example, Abū Hurayrah (one of the Prophet's companions) said:

"If I saw deer grazing in Al-Medina, I would not chase them, for Allah's Apostle said: The area between the lābatyan (two mountains) of Al-Medina is a sanctuary" [26].

In addition the Prophet is reported to have said:

"Al-Medina is a sanctuary from that place to that. Its trees should not be cut and no heresy should be innovated, nor any sin should be committed in it ... " [27].

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PART ONE:

CONTINUITY AND CHANGE IN THE

RELATIONSHIP BETWEEN THE PROPHET'S

MOSQUE AND ITS PHYSICAL ENVIRONMENT

CHAPTER TWO :

THE DEVELOPMENT OF THE RELATIONSHIP BETWEEN THE PROPHET'S MOSQUE AND ITS SURROUNDINGS BEFORE THE SAUDI ERA

For the purposes of this study, three distinct periods of development before the Saudi era can be distinguished. These periods can be clas^sified as: pre-Islamic times; the times of the Prophet and the Orthodox Caliph; and from the beginning of the U[̣]mayyad Caliphate until the Saudi reign.

2.1 PRE-ISLAMIC TIMES

Before hidjrah (the emigration of the Prophet Muḥammad from Mecca to Al-Medina) Al-Medina was known as Yath^urib, and the original oasis was situated to the north-west of the medieval walled town [1]. It was mentioned in the inscriptions of Ptolemy Stephan Byzantinus under Jathrippa, and referred to as Jth^urb by the Minaeans. [2] In the Koran it was referred to, among other names, once as Yath^urib (XXXIII,13) and in four verses as Al-Medina (IX, 101, 120, XXXIII, 60, LXIII, 8) [3]. Al-Madina is a descriptive word signifying "the town" or "the place of jurisdiction" corresponding to the Aramaic medīnta. In this sense the word in the singular form occurs ten times in the Koran and in the plural, madāīn, three times [4].

There is an obscurity about the dating of the first settlement. However, many sources indicate that the area was

inhabited by Arabs from the ‘Amālīk (Amelek) before the arrival of the Jews from the north in A.D.70, and the Arabic tribes of al-Aws and al-Khazradj who emigrated from South Arabia after the great flood and the bursting of the dam of Mā’rib in A.D.450 [5].

In pre-Islamic times, or what might be called in Arabic the era of Djāhilya (ignorance), Al-Medina was not a compact town but a group of manāzil (independent settlements) surrounded by groves of date-palms and cultivated fields. This formation might have been due to, among other factors, the distribution of wells and springs around which tribes and clans settled. In spite of the physical separation contact did exist between the the various settlements - sometimes in the form of alliances whilst at other times, in warlike confrontations.[6].

The economic life of the town was based mainly on agriculture, and dates were the first crop. The town gained some commercial importance as a trade centre from its location on the ancient trans-Arabia caravan route that connected Syria with Southern Arabia. Along this route products of Africa and southern Asia were transported to Egypt and the Mediterranean [7]. There were four aswāk (singular Sūk, market place) in Al-Medina. Probably for security reasons, these were separated from the residential areas and located on the fringes of the settlements[8].

For defence the inhabitants relied on ātām (singular ‘uṭum, fort or stronghold) to which they could retire in times of danger. These ātām probably totalled more than 200 in all. It is reported that there were 72 in Al-Medina before the arrival of the tribes of al-Aws and al-Khazradj [9] and who are said to have built 127 after their arrival, [10]. The ātām formed a substitute for a

wall or moat, which probably could not be used, because the tribes were sometimes divided amongst themselves, as already mentioned.

2.2 THE TIMES OF THE PROPHET AND THE ORTHODOX CALIPHS (1-36/622-56)

After the thirteen years of resistance and hostility that Prophet Muhammad and his early companions encountered in Mecca, he fled to Al-Medina, following the arrangements for him to live there. These had been made with the tribes of al-Aws and al-Khazraj (later called the Anṣār, "auxiliaries" of the Prophet). He arrived at the then flourishing town of Ḳubā', about three kilometres south of the present centre of Al-Medina [11], on Monday Rabī' I 8th, 1/ September 20th, 622 [12]. He stayed there for four days and laid the foundation of the Mosque of Ḳubā' [13].

On Friday Rabī' I 12 th, 1/ September 24th, 622 the Prophet, accompanied by some of his followers, rode toward the centre of Al-Medina. Every clan of the Anṣār wanted to have the honour of being his host and as he entered the town the people pressed forward to offer him hospitality. However, he blessed the crowd, and asked them to stand out of his way, declaring that his camel would halt of her own accord at the predestined spot. Eventually, the camel knelt down in a mirbad, (place where dates are dried) where it is reported that some people had been praying at that moment and in part of it a mosque had been built. This mirbad turned out to belong to two orphans from the Banū al-Nadjar tribe, Sahal and Suhayl, who presented it to the Prophet. The Prophet however, did

not accept it as a present and insisted on paying them for it[14].

Soon after the arrival of the Prophet, the construction of his mosque as the centre of the new community started. It was built in the shape of a quadrangle; its length was 70 cubits (about 35 metres) from north to south, and 60 cubits (about 30 metres) in breadth [15] (Fig. 2.1). The walls were the height of a man [16] (about 3.5 cubits, 1.75 metres), built of mud bricks on a stone foundation. In the beginning it was open to the sky, but at the request of the companions who complained about the burning rays of the sun when the summer season started, a portico for prayer was built towards the north. This consisted of three rows of palm tree trunks supporting a roof, 7 cubits (3.5 metres) high [17], of palm leaves, which were later on covered with mud [18]. Another smaller portico, suffa, was built in the south side for the Muhadjirūn (Meccan immigrants), who did not have anywhere to stay [19]. Public access to the building was given through three doorways into the south, east, and west walls [20].

Attached to the Mosque was built a private residence for the Prophet. Initially it consisted of two hudjurāt (singular hudjrah, chamber), one for Swda and the other for 'Ā' isha, the two wives of the Prophet at that time. They were built against the outer wall of the Mosque, at the east side. During their construction the Prophet was the guest of Abū Ayyūb al-Anṣarī whose two-story house happened to be the nearest to the spot where the Prophet's camel knelt on his arrival [21].

It is reported, that later on every time the prophet married a new wife, al-Ḥāritha b. al-Nu^ʿmān, who was the owner of the land located to the east of the Mosque, would give him a piece of land to

construct a ḥudjrah, for her. [22]. Eventually, the number of ḥudjurāt rose to nine, each attached to the outer wall of the eastern side of the Mosque. The first four ḥudjurāt were built of mud bricks and roofed with palm branches and mud, whilst the rest were built of reeds and mud, roofed with palm branches and mud. All of them were open into the Mosque and before each doorway hung curtains made of black hair[23].

After the Kibla (direction of prayer) was changed from Jerusalem to Mecca on Sha^cbān 15th, 2/January 11th, 624, the Mosque was subjected to some alterations. The entrance in the south wall was blocked up and a new one was made in the north wall, whilst the other two doors in the east and west walls were left as they were. The main portico, used for prayer, was transferred from the north to the south side and the suffa was moved from the south to the north [24] (fig 2.2).

After the expedition to Khaybar in Muḥarram, 7/June, 628, the Prophet enlarged his Mosque, as it was no longer big enough to accommodate the increasing numbers of his followers. The measurements increased to 100 cubits (50 metres) from north to south and 90 cubits (45 metres) from east to west (Fig. 2.3), the extension being towards the north and the west [25]. The minbar (pulpit) was introduced to the mosque in 8/630 or 9/631. It was merely a functional element for delivering the Khutba (sermon); to enable the Prophet to see the congregation and to be seen [26].

The maḥsūrah (chamber for the imām, the one who leads the prayer, in the early centuries of Islam the Caliph himself or the governor) and the miḥrāb (niche) were added to the Prophet's Mosque at later times, after his death.

Note: Private gates, including those of the Prophet's houses, that opened into the Mosque are not shown in these plans, for the lack of the required data about some of them.

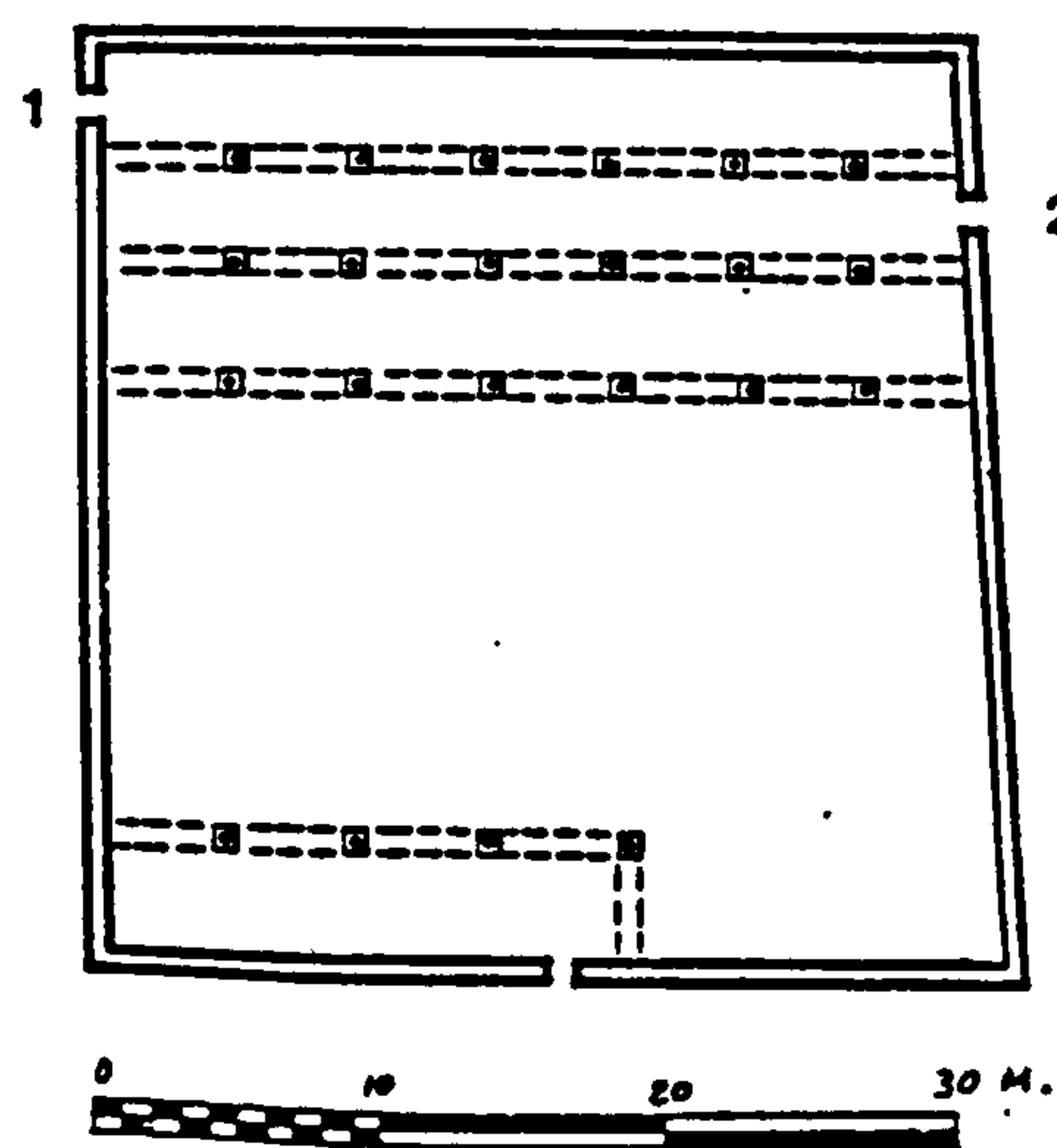


Fig. 2.1. The Mosque before changing the direction of prayer from Jerusalem to Mecca .

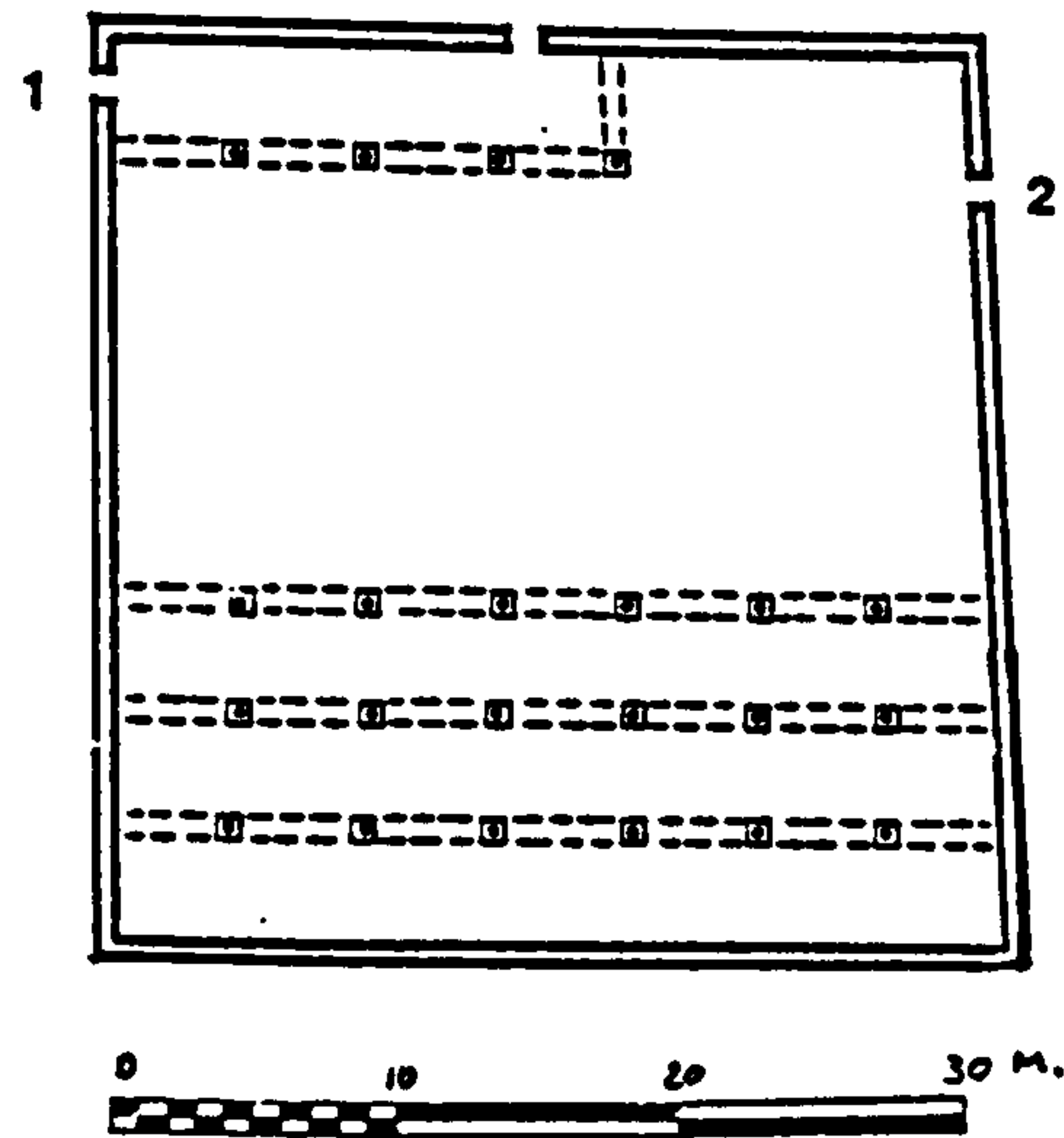
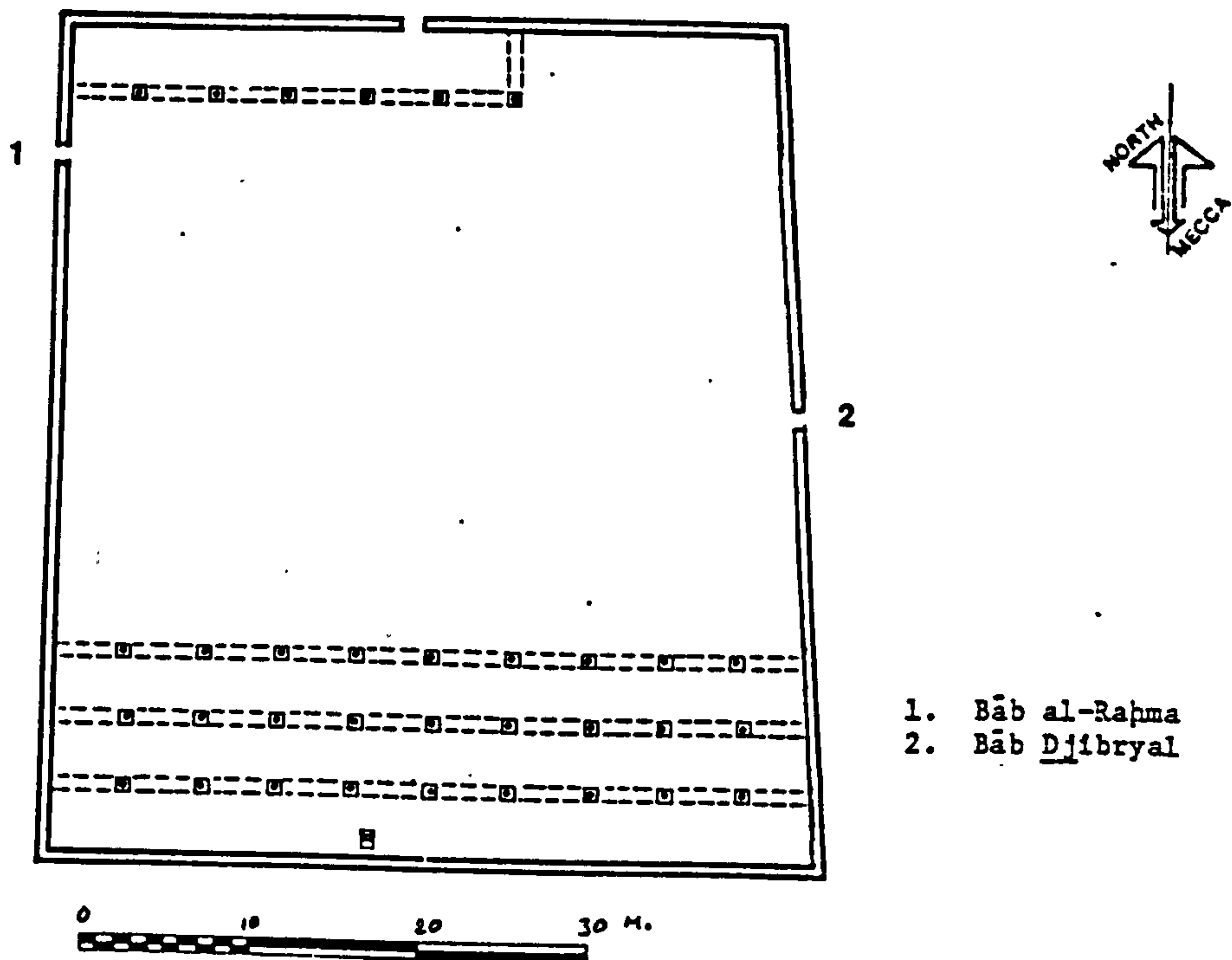


Fig. 2.2. The Mosque after changingthe direction of prayer to Mecca, 2/624.



- 1. Bāb al-Rahma
- 2. Bāb D̲j̲ibryal

Fig. 2.3. The Mosque after the enlargement by the Prophet, 7/628.

Source: Based on plans reconstructed by Mostafa, S.L., Al Madina Al Munawwara Urban Development and Architectural Heritage, Beirut, 1981, p.56, 57 and 59.

Minarets in the modern sense, were added to the Mosque during the enlargement in 88/707-91/7107 in the reign of al-Walīd b. ʿAbdulmalik [27]. However, the custom of pronouncing the adhān, (the call to prayer) from an elevated place was already in practice during the prophets time. Ibn Zubāla (d. 214/829-30) reported that, Bilāl used to call the adhān from a square pillar [astwān], called the Miṭmār (meaning high or tall object) which he used to mount by means of a stair [ʾKtāb]. It was still to be seen, during the time of Ibn Zubāla, in the house of ʿUbīdulla b. ʿAbdulla b. ʿUmar, to the south of the Mosque [28].

Once the site of the Mosque was determined it became the centre of the city. The area around it, which seems to have been at that time open or very rarely used, was distributed by the Prophet to the Mhadjirūn. YaḲut (d. 626/1229) reported:

"When the prophet arrived at Al-Medina he granted lands for houses [dūr] and quarters [ribāʿ] to the people. He marked land for Banī Zahrah in part of the area behind the mosque, He granted ʿAbdulla and ʿUtba the sons of Masʿūd al-Hudhālī their well-known land [Khīṭāt] near to the Mosque; al-Zubyar b. al-ʿAwām a large piece of land [baḲyʿ]; Ṭalḥa b. ʿUbaydulla the site of his houses (dūr); and Abū Bakr al-Sdīk the site of his house [dār] near to the Mosque. He also granted to ʿUthmān b. ʿAfān; Khalīd b. al-Walīd; al-Maḳdād and others the site of their houses [dūr]. When the Prophet was distributing these feifs to his companions, he granted, directly, those located in the non-arable vacant land. Those feifs located in areas which had already been developed were given to the Prophet by the Anṣār, and he then granted some of them as he wished ..." [29].

It should be mentioned here that the relationship between the Mosque of the Prophet, his own residence and the rest of the city became a model prototype for later Islamic towns. The main mosque was placed in the centre of the city, and the dār al-imāra (the dwelling

of the commander-in-chief, or the governor) was built immediately adjacent to it as for example in al-Baṣra, al-Kufa, Damascus and al-Fuṣṭāṭ. [30]

The companions of the Prophet not only built their houses adjacent to the Mosque, but like the Prophet himself, had gates opening directly into it. This can be inferred from the ḥādīth, (singular ḥadīth, saying and doings of the Prophet) regarding closing off some of the doors of the companions' houses which were open into the Mosque. It is reported that a few days before the death of the Prophet, he ordered all of the ḥwāb (singular, bāb, gate), and, some ḥādīth say, khawkhāt (singular khawkha, a window-like opening through a wall not high from the ground through which people can go as an access or a short cut [31]) to be closed except that of Abū Bakr [32]. Some sources mention the gate of 'Alī b. Abī Ṭālib as the one which was supposed to have been left open as it is related that the only access to his house was through the Mosque [33]. Thus al-Samhūdī suggested that both gates of Abū Bakr and Ali were left open, but the one which was actually exempted by the Prophet was that of Abū Bakr, as he had another access to his house from outside the Mosque [34].

The fact that gates of private houses, other than that of the Prophet were allowed to be opened to the Mosque whilst he was alive, and one or two were exempt from closure, after his death, is an obvious sign that from the very beginning the building was of a public nature. If it had been constructed primarily as a residential building, as Caetani and Creswell narrate [35], and which has become a common assumption in some recent studies [36], it would have been unreasonable for other people to have direct access

form their houses to it. Creswell, referring to Caetani, indicated that the Prophet initially built the Mosque as the courtyard of his house for his own private use. They both claim that the courtyard assumed a more and more public character through adventitious circumstance. This evolution continued after the death of the Prophet, and it was not until half a century later than it became a place of worship properly speaking [37].

This claim was based on three aspects of the building. Firstly, the resemblance of the layout of the Mosque together with the residence of the Prophet, the ḥudjurāt, to the Arabic dār (house) which at that time consisted of a series of small rooms grouped together around an open courtyard. In this respect, Creswell, referring also to Caetani, wrote:

"If the family was small the rooms were all grouped together on one side, for an Arab's private life required a private courtyard, closed all round, for the various domestic occupations of the womenfolk As the family increased ..., other rooms were built against the wall This system ... was adopted by Muhammed, who at that time was anticipating a considerable increase in his family and therefore required a dar of ample dimensions" [38].

Since the private gates of the companions opened into the building, it could not be used, as far as domestic work was concerned, by the Prophet's household to any greater degree than those neighbours who had direct access to it. Thus the building could not be private in the sense described by Creswell. The Prophet also did not utilize the courtyard of the Mosque in building chambers for his new wives. If he had considered it as his own private courtyard he would have done so instead of building them outside and accepting a piece of land from al-Ḥāritha b. al-Nu'mān

each time he needed to build an additional hudjra [39].

Secondly, non-religious activities took place in the building. Caetani, in attempting to emphasize this aspect of the building gave a number of instances based on the ḥadīth and sīrah (the biography of the Prophet). For example: people sat as they pleased in the Mosque or lay down and relaxed; non-Muslim tribal envoys were received by the Prophet in the Mosque and tents for the sick and wounded were erected there after the battle of 'Uḥud [40].

However, such activities together with divine services which were held in the building, emphasize the manifold nature of the Mosque as a physical embodiment of the new religion which embraces all aspects of life: social, political and religious. These points of view cannot be separated in Islam. In the Mosque the believers observed the congregational prayer with the Prophet, where he delivered the Friday sermon, and other addresses which dealt not only with religious teaching but also with all aspects concerning the life of the community.

Thirdly, much emphasis has been laid on some isolated events which took place in the Mosque. For example, a stranger, converted to Islam after an interview with the Prophet, came straight into the courtyard of the Mosque with his camel and left it kneeling there; on one of the festivals a band of Abyssinians were permitted to dance with their lances in the courtyard; disputes took place there over business and dogs entered the building [41].

Apart from the evidence included in the ḥadīth and sīrah, in which according to Creswell, biographers of the Prophet have failed to grasp the real aspect of his Mosque [42], Bisheh suggests, in addition, two early alterations in the building: the

re-orientation of the Kibla from Jerusalem to Mecca, and its enlargement with the introduction of a minbar, which would have been inappropriate for a strictly residential building [43].

In the Prophet's time the city continued to preserve its tribal character within its spatial organization. Although the pre-Islamic settlements seem to have taken the form of quarters within the city, they preserved their names as manāzil of each tribe [44]. Related groups of the Muhadjirūn too, clustered together and built their houses forming their own quarters [45]. Sites for these new quarters were granted by the Prophet and subdivided according to the needs of the individual members of the tribes or clans [46]. There may have been nine quarters in Al-Medina during the time of the Prophet, corresponding to the number of tribal mosques which were said to have been, like the quarters themselves, named after the different tribes or clans [47].

As indicated earlier there were four aswāk in Al-Medina in the pre-Islamic times. However following his arrival in Al-Medina, the Prophet is reported to have made a new sūk, for the city [48]. He initially chose the site of the baky^c of al-Zubyar, which was at less than 150 meters distance from the Mosque [49], as the location. But, after he had been prevented from doing so by the owner of the land, Ka^c b b. al-Ashraf, he moved it to the area situated between the Muṣalla (the place where the ʿyīd, feast, prayer is performed) of the Prophet and Thanyāt al-Wadā^c. The Muṣalla, which is the southern edge of the sūk was 1,000 cubits (about 500 meters) from the Mosque of the Prophet [50]. Now that area is known as al-ManāKha and a few commercial activities can still be seen in some parts of it. The sūk was open with no buildings during the

Prophet's time and seems to have continued so until the reign of Mu'āwīya b. Abī Sufyān (41/661-60/680) who is said to have built two houses in it [51]. The fact that the place of the baḲy of al-Zubyar was chosen first may suggest that the Prophet preferred the sūḳ to be near to the Mosque.

The forms of defence, on which the city depended for centuries were its fortresses and topography, both being very difficult for invaders to penetrate. The northern side of the city was the least protected as here the valleys of Al-Medina joined. Following the advice of Salmān al-Fārsī to the Prophet, a khandak (ditch) was dug around the northern side in order to defend the city against the attack of the Meccan, Ḳuraysh and their allies in the battle of the Khandak in 5/627. During this battle, it was reported that the Prophet also used some of the pre-Islamic fortresses for the women and children to stay in [52]. The city, however, continued unwallled until 263/876-7 [53].

The Prophet died in Rabi' I 13th, 11/June 8th, 632 [54] having spent the last ten years of his life at Al-Medina. He was buried in the place where he died, in 'Ā' isha's ḥudjrah. Abū Bakr was elected as his caliph and he and his two successors continued to reside in Al-Medina which thus continued as the capital of the rapidly growing Islamic state. During the first year of his brief reign which lasted for about two years, he was engaged in subduing revolts among some tribes, the wars of the Ridah, while in the second year he started the foreign campaigns in the north. Thus, as far as the Mosque is concerned, he contented himself with merely restoring some of the palm pillars, which had deteriorated [55]. Abū Bakr died in 13/634 and was buried next to the Prophet in the

hujrah of 'Ā'isha [56].

'Umar b. al-Khaṭāb was appointed by Abū Bakr to be his successor after he had consulted some of the Prophet's companions [63]. During his reign the area of the Islamic State expanded and the population of Al-Medina increased. In 17/638, at the request of the people of Al-Medina, he enlarged the Mosque [64]. He is reported to have said on this occasion, "Had I not heard the Prophet say we should increase the size of our Mosque, I would not have enlarged it" [65]. He also gave the instruction "Protect the people from rain. Beware of red and yellow decoration for they put the people to trial" [66]. ("Put the people to trial" meant "distract them from prayer" [67]). Thus the new structure conformed to the example set by the Prophet in its simplicity, as opposed to the later constructions.

After this enlargement, the measurements of the Mosque increased to 140 cubits (69.70 metres) from north to south and 109 cubits (54.30 metres) from east to west (Fig. 2.4). The extension was in all directions except the east where the houses of the Prophet's wives stood. Two new colonnades were added to the west side and one to the south, whilst the extension to the north was 31 cubits (15.43 metres) [68]. The enclosure walls were built of sun-dried bricks set on stone foundations dug to the depth of a man's height. According to al-Samhūdī, palm trunks continued to be used as columns [69], but other accounts say that 'Umar made the columns of mud brick and took away the wooden ones [70]. The roof, which was of thatched palm-leaves and mud as in the earlier Mosque, was raised to 11.00 cubits (5.48 metres) in height. Over this roof and surrounding it on all sides, stood a sutrah (parapet), 2-3

cubits (1-1.5 metres) high. Six doors were made to the Mosque instead of three: two in the north wall; two in the east and two in the west [71]. Finally, 'Umar is reported to have said, after the enlargement of the Mosque had been completed, "if we had extended it as far as the Djbāna, it would still be the Prophet's Mosque" [72]. In this respect Abū Huryrah also reported that the Prophet said, "If this Mosque was extended as far as San'a it verily would still be my Mosque" [73].

Outside the Mosque, to the north end of the east side 'Umar built a raised platform, ruhba, called al-Butayha, upon which the people might recite poetry or sit and talk [74]. He was murdered on 23/644 and was buried in the room of 'Ā'isha, at the side of the Prophet and Abū Bakr. Four days later 'Uthmān b. 'Afān was elected as the third Caliph of the Prophet [75].

The population of Al-Medina continued to grow during the rule of 'Uthman. Thus the people complained that the Mosque was too small to accommodate them to the extent that some observed the Friday Prayer outside (in the rihab). In this regard 'Uthmān consulted the notables of the city who unanimously agreed that the Mosque should be demolished and a larger one built [76]. So in Rabi' I, 29/ December, 649 the demolition of the old Mosque and rebuilding of the new one with more durable building material was started. The construction work lasted for about ten months and was completed in Muharm 1st, 30/ September 4th, 650 [77].

In this enlargement the Mosque extended nine cubits (4.48 metres) in each direction except the eastern side again on account of the houses of the Prophet's wives. Thus, the building measured 160 cubits (79.68 metres) from north to south and 120 cubits (59.76

metres) from east to west [78] (Fig. 2.5). The walls, unlike the old ones, were built of hewn and carved stones and joined with lime mortar (Kīṣa). The columns were also of cut stone, joined by iron cramps bedded in lead and the roof was of teak [79]. The same six entrances were left as those in the reign of ʿUmar [80].

According to Ibn Shaba (d. 262/876), the maksurah (chamber for the imām) was introduced to the Mosque by ʿUthmān for his personal safety, after the murder of ʿUmar, while he was leading the prayer in the Mosque [81]. Ibn Khaldūn (d. A.D. 1406) however, indicated that it was first constructed by Muʿāwīya b. Abī Sufyān (at Damascus), either in the years 40/660 or 44/664 after an assassination attempt by a Kharidjīāt fanatic. He added also, that it had been said that this innovation was attributed to Marwān b. al-Ḥakam, governor of Al-Medina, after he was stabbed by a Yamanite in the year 44/664 [82].

As far as the layout was concerned, the new Mosque, as is clear from the plans (Figs. 2.3, 2.4 and 2.5), preserved the basic characteristics of as it was at the time of the Prophet and his first two successors. In addition, we were told that during the construction Zayd b. Thābit, who was apparently in charge of the project, put the new stone columns in the same places as those occupied by the old palm-trunks [83]. These facts demonstrate that a conscious effort was made to preserve the original layout of the building.

The major change however, was in the building materials and construction techniques, as indicated earlier. Thus it is important to examine the reaction of the people, who included some of the great companions of the Prophet, to the transformation that

Note: Private gates, including those of the Prophet's houses, that opened into the Mosque are not shown in these plans for the lack of the required data about some of them.

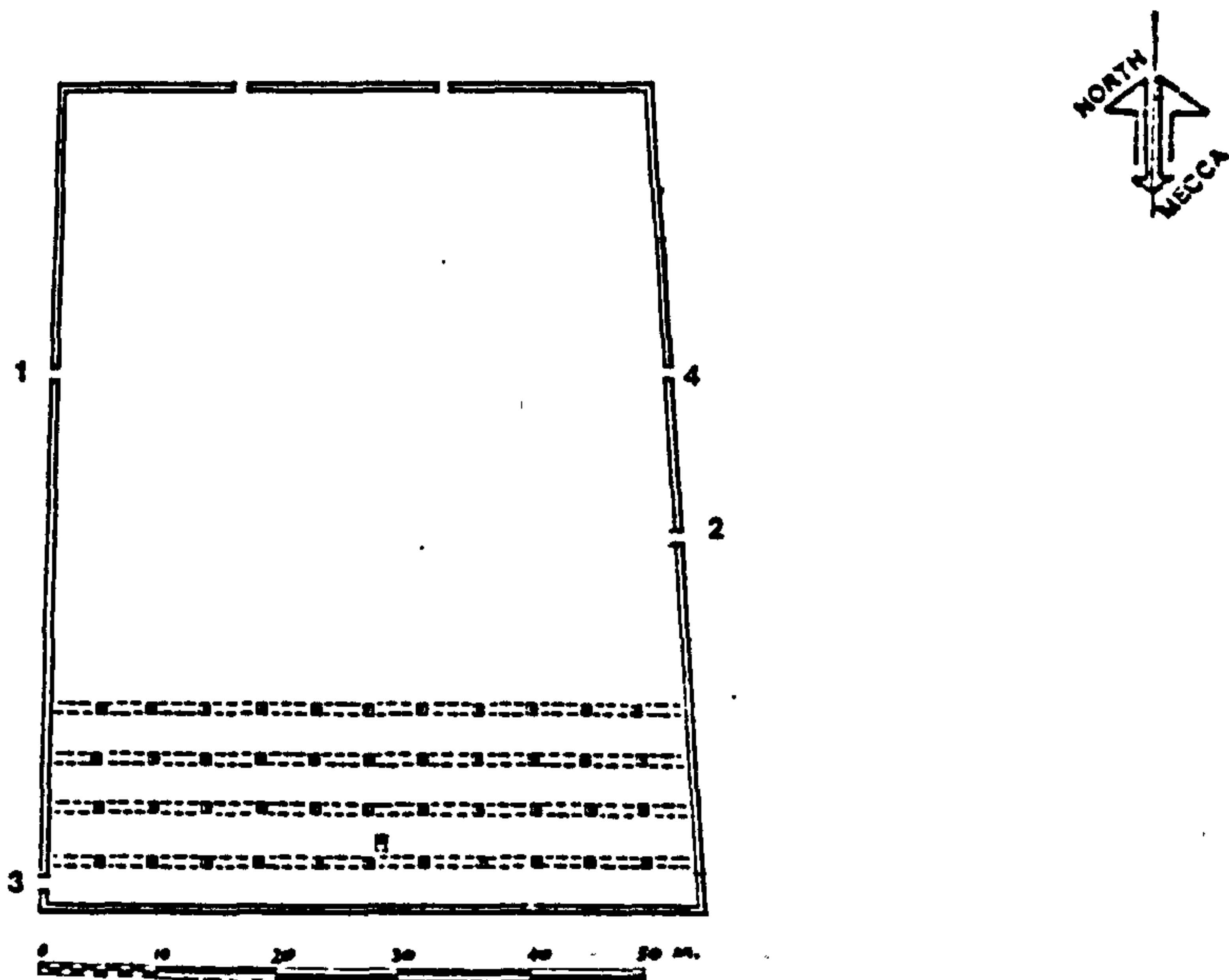


Fig. 2.4. Mosque after the enlargement of 'Umar, 17/637.

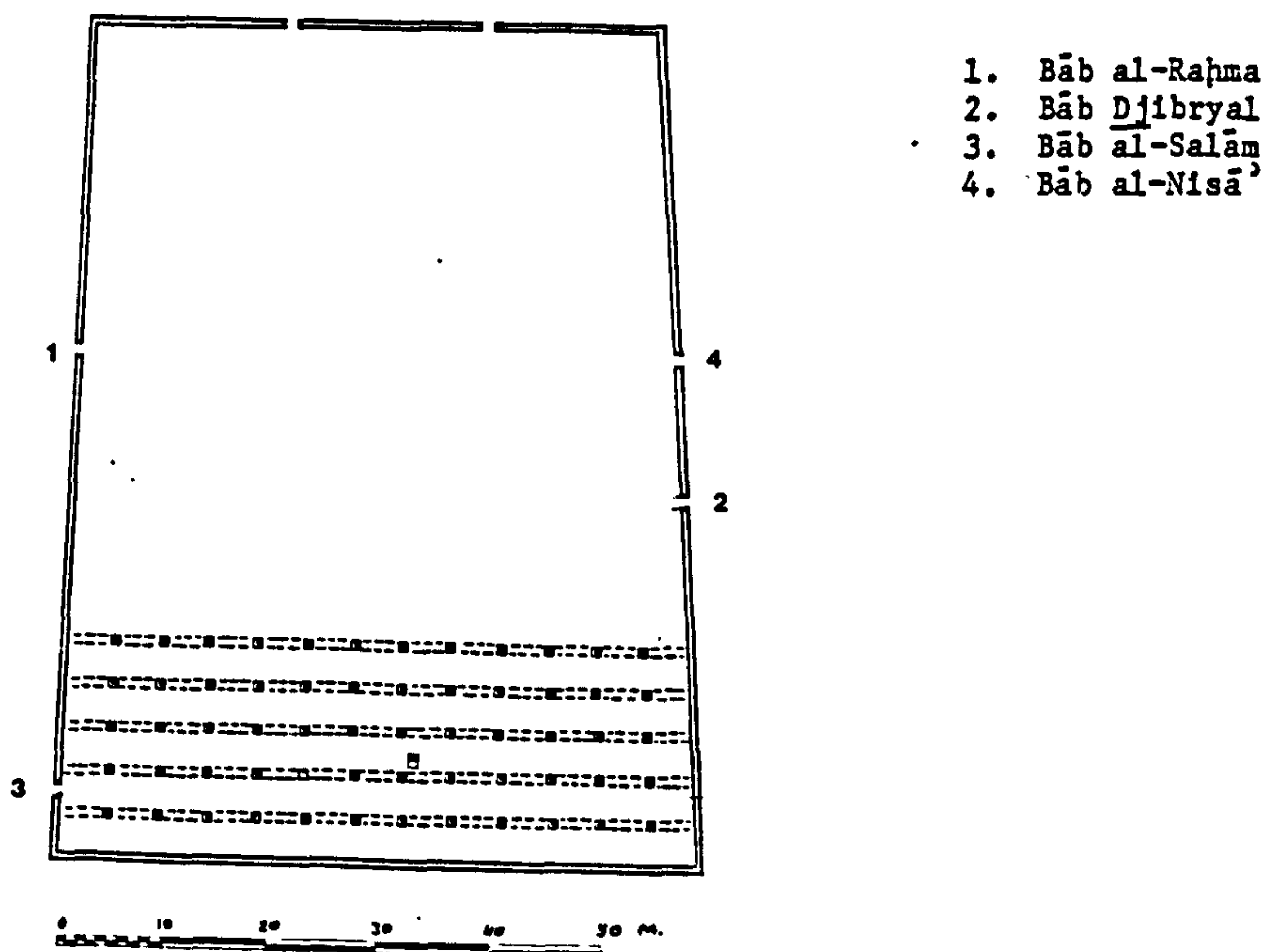


Fig. 2.5. The Mosque after the enlargement of 'Uthmān, 29/649-30/650.

Source: Based on the plans reconstructed by Mostafa, op. cit., p.63 and 64.

‘Uthmān’s enlargement had brought about. In this respect Maḥmmūd b. Labid reported:

"When ‘Uthmān b. ‘Affān intended to build the Mosque ... the people did not approve it. They wanted it to be kept in the same state. Thereupon he said: I heard the Messenger of Allah (may peace be upon him) say: "He who built a Mosque for Allah, Allah would build a house for him like it in Paradise" [84].

‘Uthmān is also said to have quoted this saying of the Prophet on different occasions during and after the reconstruction of the mosque in order to allay criticism of his initiative [85]. With respect to the statement that, "They wanted it to be kept in the same state", al-Samhūdī remarked that:

"... by rebuilding the Mosque of mud-bricks and palm trunks as ‘Umar did, because it was in accordance with the work of the Prophet. Thus al-Baghawī said in Sharḥ al-Sunā: Probably what the companions of the Prophet disliked in ‘Uthmān’s reconstruction of the Mosque was its building of carved stones, but not merely the enlargement ... " [86].

In fact this attitude towards change together with what ‘Umar said regarding the enlargement of the Mosque, cited earlier, are obvious examples of the desire of the early Muslims to preserve whatever related to the Prophet. Nevertheless, the new development by ‘Uthmān might be justified if it is considered in the context of the development which took place in the city in general at that time. In this connection, Bisheh writes:

"... by ‘Uthmān’s caliphate ... the Arabs had been exposed to the cultural influences of the conquered territories for a long enough period to transform their outlook and taste. This new outlook is reflected in the upsurge of building activity and remarkable

expansion of Madinah (Al-Medina). ... The Prophet's Mosque, which had so far preserved its unprepossessing simplicity, was no longer compatible with the new conditions. It was virtually inevitable that a new Mosque, corresponding in luxury and sumptuousness to the private residences, should be erected"]87].

‘Uthmān is said to have had the pre-Islamic forts of Al-Medina taken down, but remains of them could be seen as late as the 4th/10th century [88]. He was killed in 35/656 [89] and ‘Alī b. Abī Ṭālib became his caliph. ‘Alī was opposed by Ṭalhā and al-Zubayr, first from Mecca and then from Basra as well as by the then governor of Syria, Mu‘āwiyā. In order to counter these moves, ‘Alī left Al-Medina for Irak in October 656. He made Kufa his capital and after his death in 40/661 and the acknowledgement of Mu‘āwiyā as caliph, Damascus became the capital [90].

1.3 THE DEVELOPMENTS FROM THE BEGINNING OF THE UMAIYAD CALIPHATE UNTIL THE SAUDI REIGN (40/661 - 1344/1926)

With the transfer of the capital of the Islamic state from Al-Medina, the city descended, politically, to the rank of a provincial town that was ruled by governors appointed by the Caliphs. The city could not of course become totally unimportant because of its venerable associations and the Mosque of the Prophet. At the same time, it became a momentous centre of Islamic intellectual life. In the Mosque of the Prophet scholars devoted themselves to the collection and study of legal and ritual enactments. One of the most prominent of these scholars was Malik b. Anas (d. 179/795), the founder of the Maliki school, one of the

four Sunni legal rites [91].

Despite the political changes Al-Medina continued to grow during the Umayyad rule (41/661-132/750). In the reign of Mu'āwīya (41/661-60/680) [92], who gave special attention to the city, it was supplied with water from the 'Ayn al-Zarka spring in the Ḳubā' area, via a subterranean aqueduct [93]. Some developments were observed on the 'Aaḳīḳ valley banks to the west of the city, where there were many palaces and orchards the ruins of which could be seen in 1353/1934 [94]. The area around the Mosque was paved with flagstones and became known as the balāṭ. This balāṭ was, later on, continued by the Caliph 'Abdulmalik b. Marwān (65/685-86/705). According to the description of the Ibn Shaba (d. 262/876) it covered most of the city's three major thoroughfares [95] and its width at some points was 10 cubits (about 5 metres) [96]. Ibn Shaba indicated also, that the width of other streets, during his lifetime, was 6 cubits (3 metres) and 5 cubits (2.50 metres) [97]. In the sūḳ, Mu'āwīya, as mentioned earlier, built two private houses, which were followed by a major construction project by the Caliph Hishām b. 'Abdulmalik (105/724 - 125/743) that took over the whole area of the sūḳ. Shops were built on the ground floor, while the upper floor was used for accommodation. He is reported, in addition, to have carried out a similar development in the vacant area at the Baḳy' of al-Zubayr [98].

The only enlargement of the Mosque during the Umayyad rule was carried out by the Caliph al-Walīd b. 'Abdulmalik (86/705 - 96/715). He wrote to his governor at Al-Medina, 'Umar b. 'Abdulazīz, ordering him to demolish the old Mosque and the neighbouring houses, including those of the Prophet's wives, and to

incorporate their sites into the building of the new edifice [99].

It is reported that the people of Al-Medina were disappointed by the news regarding the demolition of the houses of the Prophet's wives. 'Aṭā' al-Khurasāny, who was there when the letter from al-Walīd was being read, said "I have never seen a day with more sore weeping than there was among the people that day" [100].

Sa'īyd b. al-Musayab, a well-known scholar of Al-Medina, is also reported to have said on this occasion, "I wish, by Allah, that they would leave them alone just as they are ..." [101].

The demolition began in Ṣafar, 88/January, 707 [102] and was carried out by local workmen. However, the actual construction had to wait till the arrival of the workmen sent by al-Walīd. It is said that he sent many mosaics and marbles, Greek and Coptic artisans (inhabitants of Syria and Egypt) to Al-Medina. Some sources say that these items and people were sent by the Byzantine Emperor to al-Walīd at the latter's request, who in turn sent them on to Al-Medina [103]. The work took three years and the supervision was entrusted to Ṣāliḥ b. Ḳaisān [104].

In this enlargement the Mosque was extended towards the north, east and west. Its length measured 200 cubits (99.6 metres), from north to south, and the southern wall measured 167.50 cubits (83.4 metres) [105]. The south eastern and the south western angles were 85° and 88° respectively [106]. The enlargement towards the east resulted in the incorporation of the sites of the houses of the Prophet's wives within the enclosure of the Mosque. The mud-brick walls of the chamber of 'Ā'ishā in which the Prophet and his two first Caliphs were buried were replaced by stone ones. In order to keep the chamber away from the direction

of prayer, an outer enclosure wall was built and its northern side was altered by means of a triangular projection towards the north (Fig. 2.6) [107].

The walls enclosing the Mosque were built of cut stone, in regular courses laid in lime mortar. The columns were also made of stone - drums which were hollowed out and fitted together by molten lead and dowels of iron. On these rested wooden beams which in turn supported the flat timber ceiling which was 23 cubits (11.45 metres) above the floor. Two cubits (one metre) above this gilded ceiling was another roof sheathed with plates of lead and capped by a crenellation [108]. The earlier maksūrah of stone was replaced, and built of teak [109].

Thus the Mosque began to change and new features that influenced later mosque developments emerged. The courtyard was bordered for the first time with porticoes (riwāks), on the east, west, and north sides. Four square-shaped minarets were built at each corner of the Mosque, though the one to the southwest was demolished soon afterwards by the Caliph Sulimān b. 'Abdulmalik (96/715 99/717), as it is said that it overlooked the house of Marwān b. al-Ḥakam where he lodged during his visit to Al-Medina. The minarets measured 60 cubits (30 metres) in height, and 8.00 cubits (4 metres) square [110]. Other new features included the miḥrāb in the form of a concave niche and the nave and the dome over the bay in front of the miḥrāb [111]. The walls of the prayer hall were decorated for the first time too, and special attention was given to the Kibla wall. Marble, gold, mosaic and fusayfisā' (gold cubes) were used, and from which inscriptions containing verses from the Koran and other artistic work in the form of trees,

fruits and architectural compositions were produced [112].

With the end of the Umayyad reign, the centre of the Islamic state moved from Damascus eastward to Baghdad, which became the capital of the 'Abbasid Caliphate (132/750 - 656/1258). At the beginning of the 'Abbāsīd rule, Al-Medina was the centre of two short-lived and unsuccessful revolts by some descendants of 'Alī b. Abī Talīb. The first one was led by Muḥammad b. 'Abdullah in 145/762, who restored the ditch that was dug by the Prophet around the town, while the second was led by Ḥusayn b. 'Alī in 169/786. The town, in addition, suffered severely from the attacks of the nomadic tribes of Sulaym and Hilāl during the reign of al-Wathīk, whose troops defeated them in 230/845 [113].

As a result of these hostilities a wall was built around the city for the first time in 263/876-7. This wall of mud bricks was replaced, between 367/978 - 372/983, by a stone one, when the holy city was threatened by the conquest of the Faṭīmīd of Egypt. It was restored in 540/1145-6 by DJamāl al-Dīn b. al-Mansūr. A few years later, in 558/1162-3 Nūr al-Dīn b. Zankī built a second wall of a much greater extent with towers and gateways, to enclose both the new development that took place outside the old wall, and the town itself [114]. This wall is also said to have been built in preparation for a threatened attack by the Crusaders who arrived at the port of Yanbu, about 275 kilometres to the west of Al-Medina, in 578/1182-3 in the first stage of their unsuccessful advance on the city [115].

The development and prosperity which characterized the early days of the 'Abbāsīd reign seemed to have less effect on the more southern parts of the state. During their rule, which lasted for

more than five centuries, the Mosque of the Prophet was rarely restored and only once enlarged [116]. This enlargement was carried out during the Caliphate of al-Mahdī (158/775 - 169/785).

The work, which was mainly restricted to the northern side of the building, was started in 162/778 and completed in 165/781-2. The five colonnades to the north of the courtyard were pulled down and replaced with new ones after the extension of the building 55 cubits (27.4 metres) to the north (Fig. 2.7) [117].

The makṣūra of al-Walīd was demolished and replaced with a new one that occupied the entire first southern colonnade [118]. Access to the Mosque was given through 24 doorways, most of which were walled up later on [119] and by the time, when Ibn Djūbīr visited Al-Medīna, in Muḥaram, 580/ April, 1184, there were only four still in use, two on the east and the other two on the west side [120]. In his visit he also reported that the Mosque had three minarets, one in the south-east, and the other two in the north-east and west corners [121].

As far as the city was concerned, Ibn Djūbīr indicated that it was double-walled with four gates, each one facing another in the opposite wall. The whole city was surrounded by palms which were most plentiful on the south and east side though less so on the west; whilst the road to Kubā' he added, which was once a large city contiguous to Al-Medīna, passed through continuous palm-groves. Around the Ḥaram he wrote, ran a road paved with cut stone and the first thing that struck the eye, when approaching the city at Dhū al-Ḥulayfa, now known as Abyār 'Alī, 10 kilometres to the south of the city, was the tall white minaret of the Mosque [122].

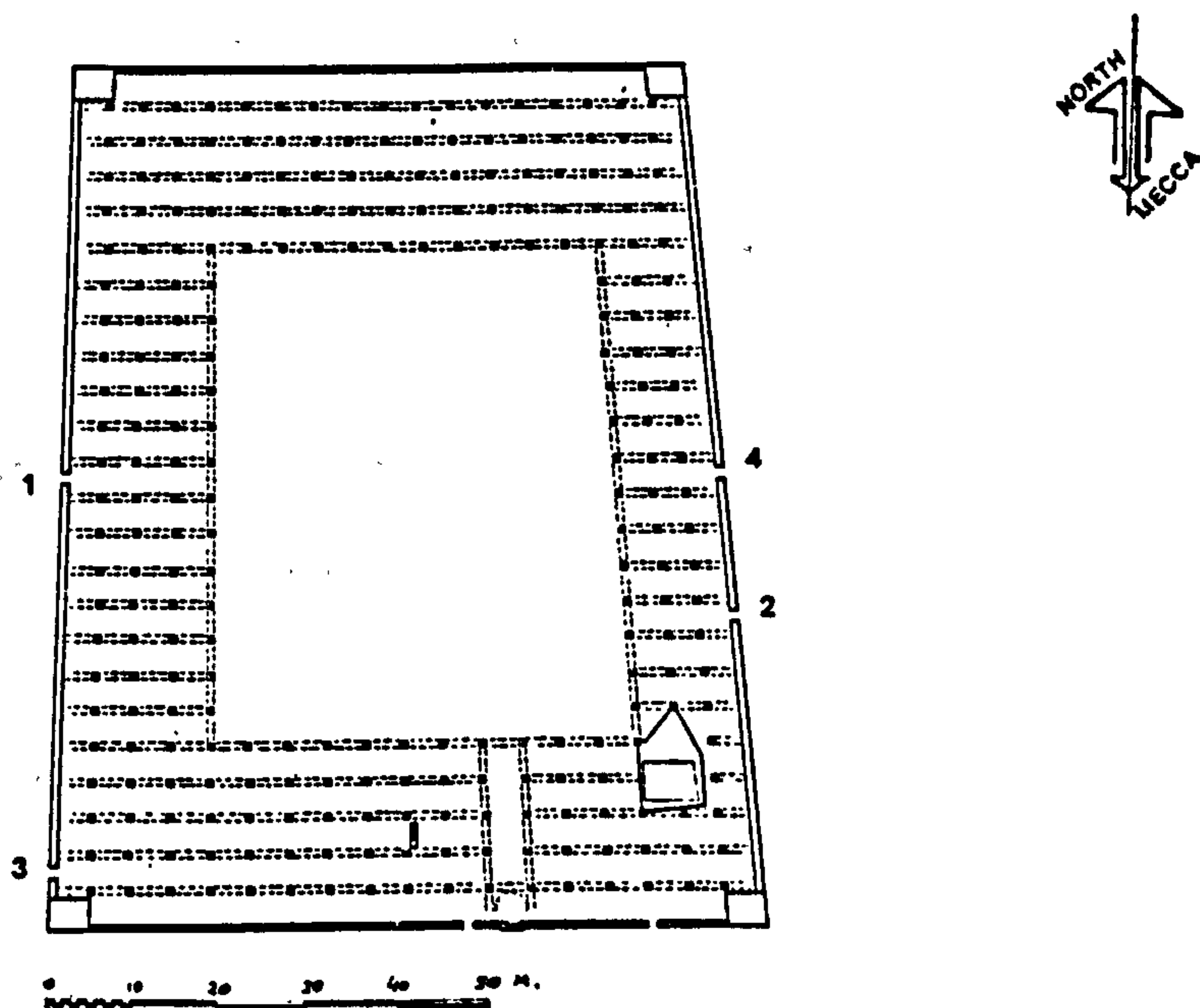


Fig. 2.6. The Mosque after the enlargement of al-Walid b. 'Abdulmalik, 83/707 - 91/710.

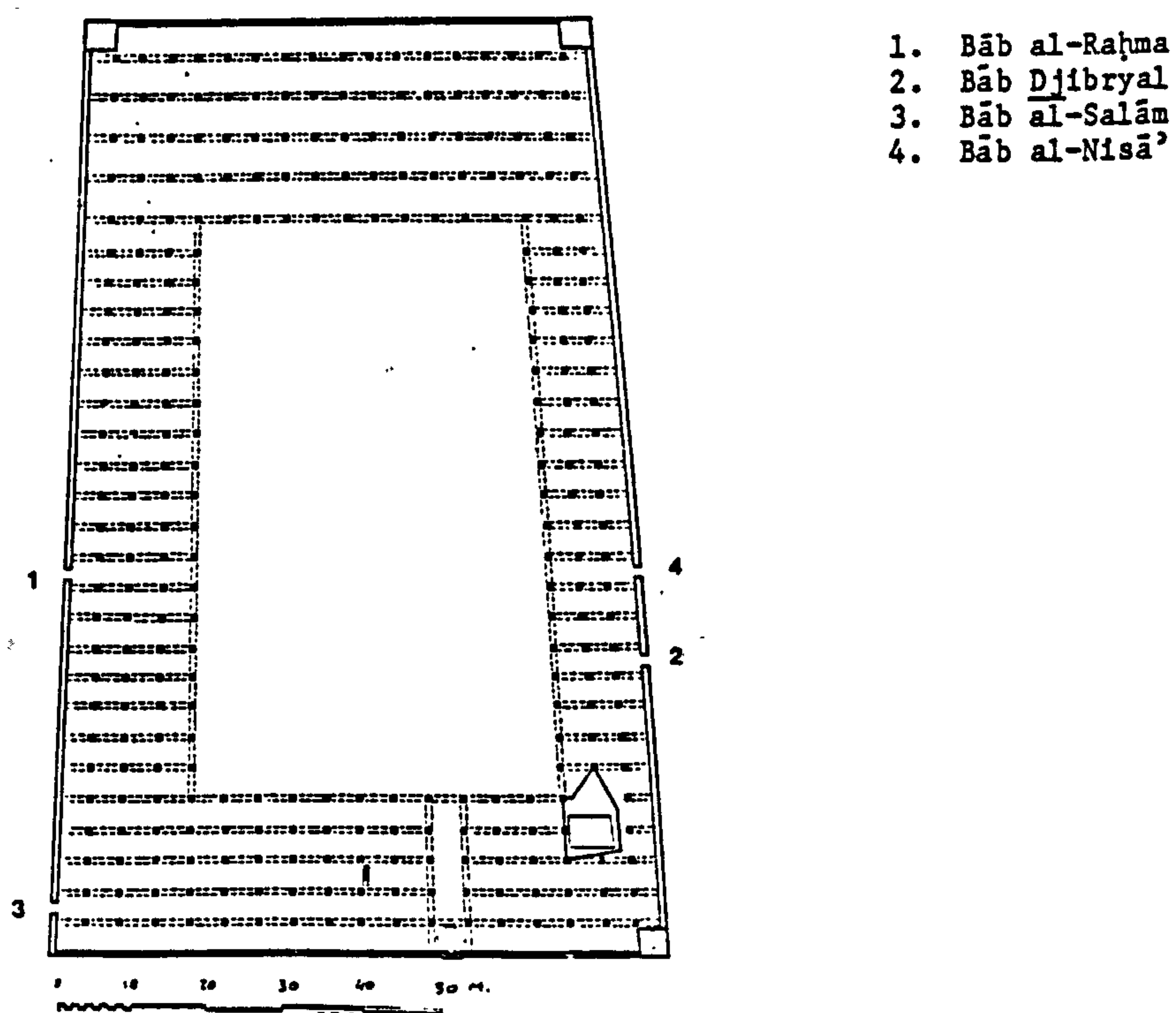


Fig. 2.7. The Mosque after the enlargement of al-Mahdi, 162/778 - 165/782.

Source: Mostafa, op. cit., p. 67 and 76.

In 654/1256, Al-Medina was threatend by a volcanic eruption, known as the fire of Hidjāz. After a series of earthquakes, a stream of lava appeared, and fortunately flowed to the east of the town and then continued its way northwards [123]. About three months later a fire broke out in the Mosque and almost all the building was destroyed [124]. Restoration was then started by the caliph al-Mu^ctaṣim Bī Allah but, with the fall of Baghdad, the capital city of the diminishing ʿAbbāsīd state in the hands of the Tatars in 656/1258 and the collapse of the caliphate, the work stopped [125]. Afterwards, the restoration work resumed and was continued by the Mamluk sultans of Egypt who showed some interest in the sanctuary. In 678/1279 in the reign of the Sultan al-Manṣūr Ḳalawun, the dome was first introduced to the Mosque. It was built above the chamber in which the Prophet and the two first Orthodox Caliphs were buried [126]. In 701/1301 the Sultan Anaṣir Muhammad b. Ḳalawun carried out some repairs to the Mosque. A few years later, he constructed the south-western minaret and in 729/1328-9 he enlarged the Kibla prayer hall by adding two new colonnades in the courtyard [127]. After this however, the most important restoration work was carried out during the reign of the Sultan Kāʾit Bay (872/1468 - 901/1496). He is reported to have started large scale renovation work in 879/1474-5 [128], but in 886/1481 after the work had been completed, the south-eastern minaret was struck by lightning. According to al-Samhūdī, who lost his own library in this incident, almost the entire building burned down again. When the Sultan learned of this, he gave the order for the building to be restored for the second time. During this restoration, the dome over the ḥudjrah was replaced with a larger

one which required the extension of the southern part of the building towards the east and the alteration of the eastern wall (see Fig. 2.8). Other smaller domes were also added to the building, and against the western wall, between Bāb al-Salām and Bāb al-Rahma, a small minaret, ribāṭ (a charity residence) and madrasa (school) were constructed [129].

At the time of al-Samhūdī (d. 911/1506) the city was still surrounded by the wall that was built by Nūr al-Dīn b. Zankī in 558/1162, and had four gates. The Bāb of al-Sūḵ in the western wall next to the Muṣala, stood at a distance of 645 cubits (321 metres) from the gate of al-Salām of the Haram. Also, in the western wall there was another gate known as al-Darb al-Saghīr (the small access). Towards the north was Bāb al-Shāmī and eastwards Bāb al-Bakī^c at a distance of 433 cubits (215 metres) from the gate of Djabrīl in the Mosque [130]. In addition it seems that the spatial organization of the city had not dramatically altered for about six centuries. Al-Samhūdī, in his account of the houses of the companions of the Prophet that surrounded the Mosque, and description of the balāṭ (mentioned earlier), confirmed the same measurements of width of some streets and descriptions of locations reported by Ibn Shaba (d. 262/876) [131].

After the Ottoman occupation of Egypt in 923/1517, Al-Medīna, as well as Mecca, came under their control [132]. From that time on, the Ottoman Sultans added to their titles that of "Custodians of the Two Holy Mosques". In the beginning and towards the end of their rule, the holy cities and their mosques were given special attention. During the reign of the Sultan Sulīmān b. Salīm the Magnificent (926/1520 - 974/1566), the walls of Al-Medīna and

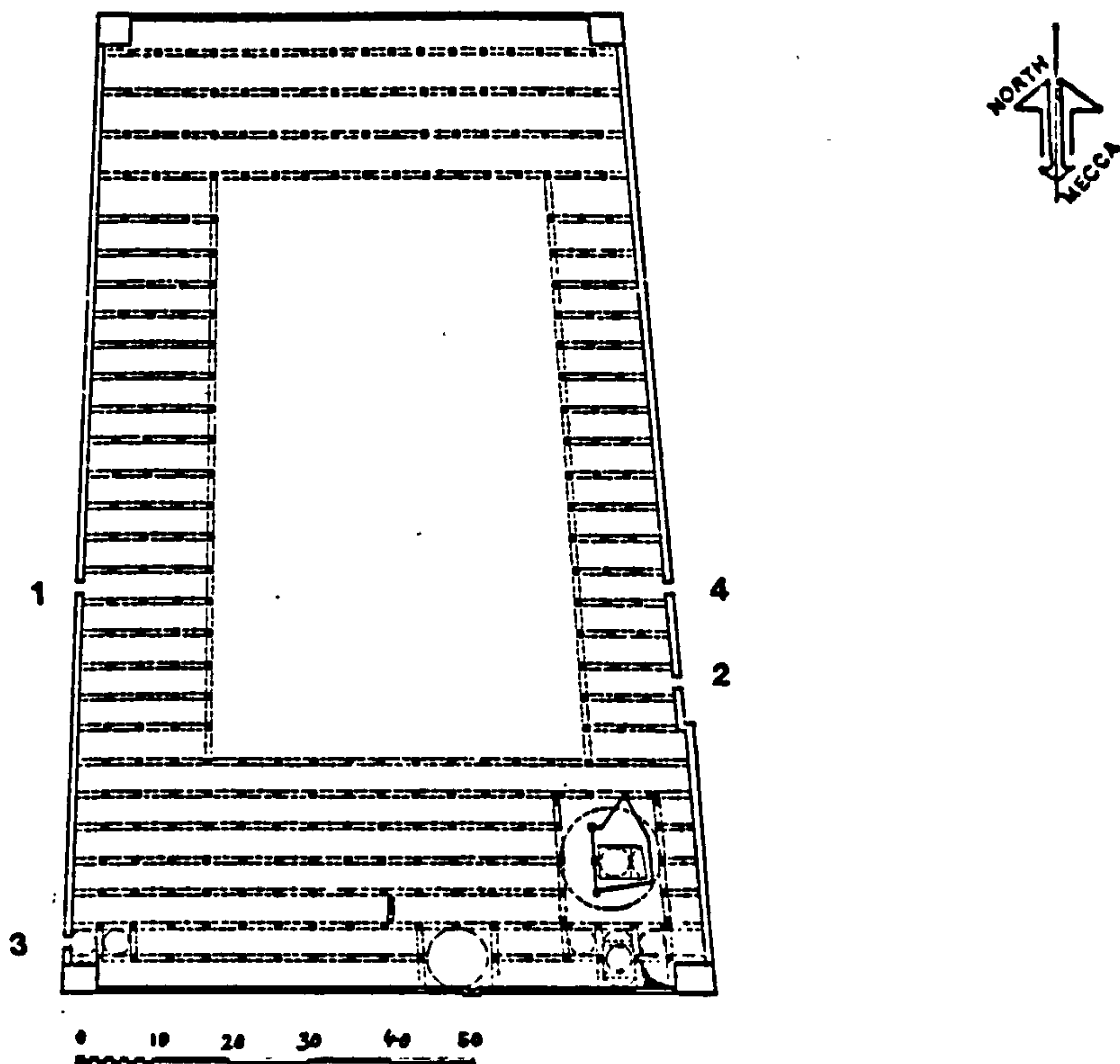


Fig. 2.8. The Mosque after its restoration by Ka't Bay after the thunderstorm in 886/1481.

Source: Mostafa, op. cit., p. 87.

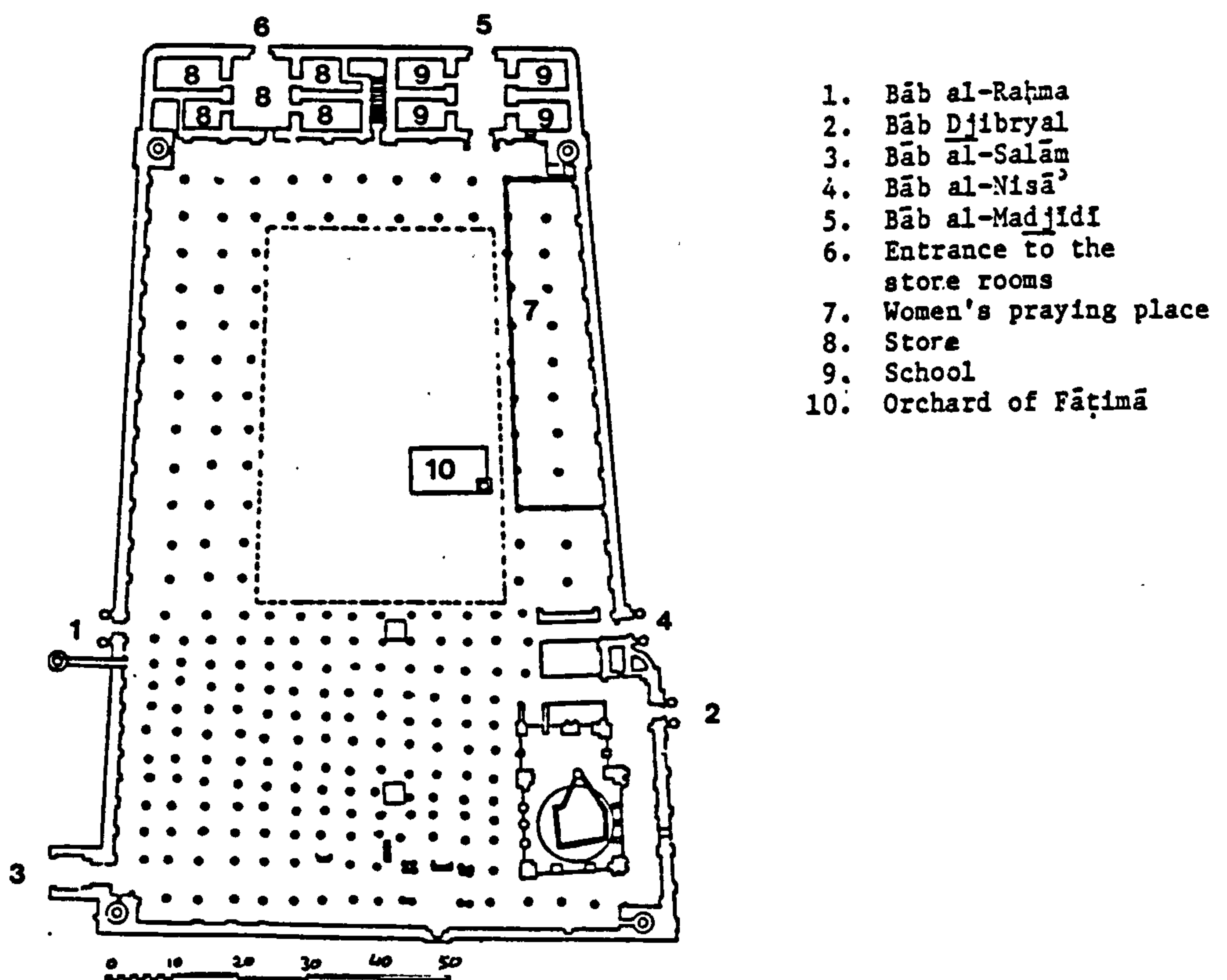


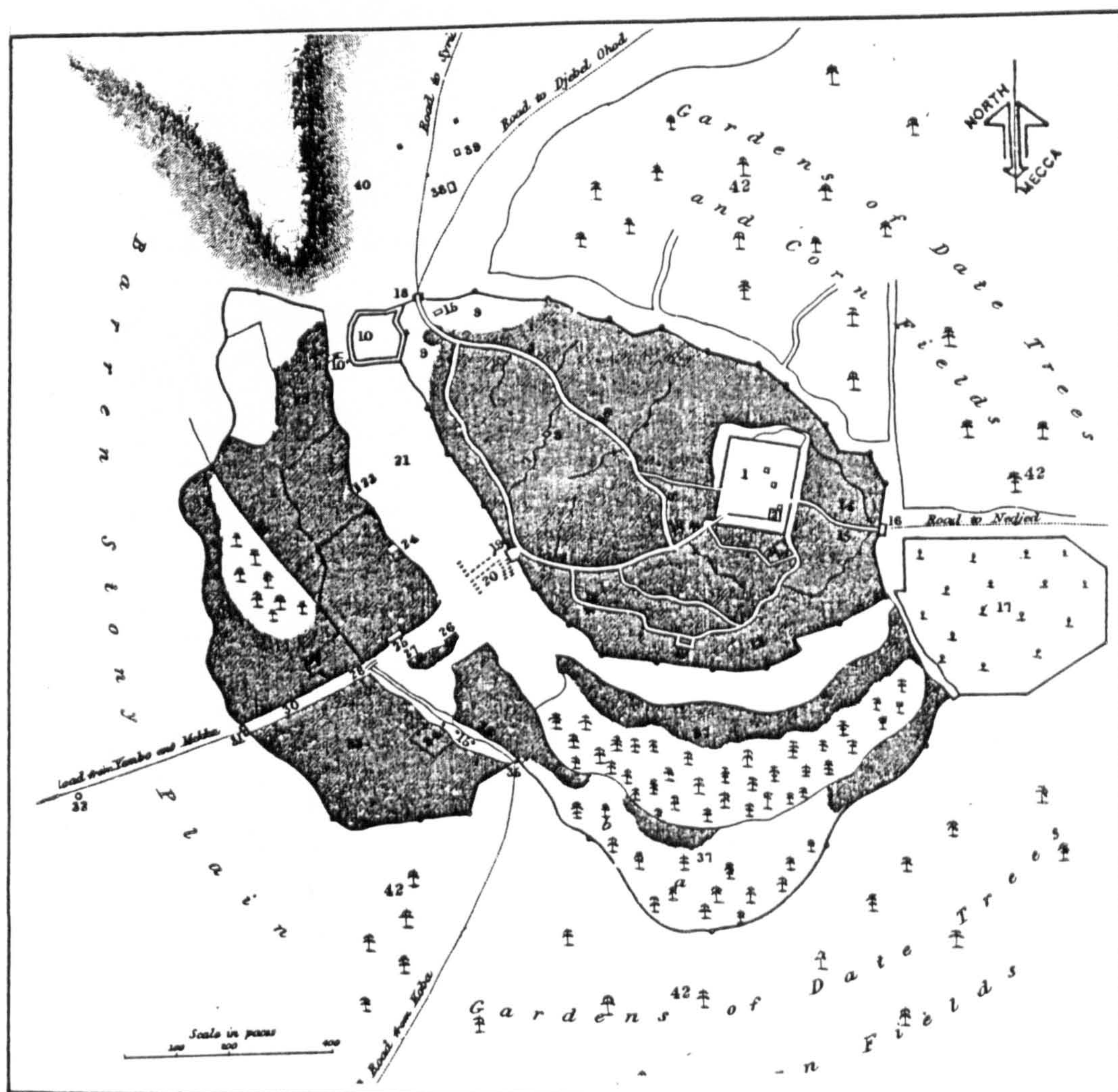
Fig. 2.9. The Mosque after its reconstruction by the Sultan 'Abdulmadjid, 1265/1848 - 1277/1861.

Source: Rif'at, Ibrahim, Mirāt al-Ḥaramyn, Beirut, (without date), V.I., Fig. 82.

the fort to the north of the town were torn down and rebuilt of basalt and granite. According to al-Rūmī (d. 959/1552), the construction of the wall started in 939/1532 and the fort in 944/1537, and both were completed in 946/1539. The total length of the wall was 4000 cubits, dhira^c ʿamal (3000 metres) [133] and its height was 35 - 40 feet (10.70 - 12.20 metres) [134]. In 947/1540, the Sultan ordered some repairs to be carried out to the Ḥaram. Among these were the demolition and reconstruction of the north-eastern minaret, and restoration of some parts of the walls [135]. After that it seems no significant development took place in the Mosque or the town during the following three centuries.

In 1230/1815 we have a description by Burckhardt, who visited the town and drew its first available map (Fig. 2.10) [136]. He indicated that the city was divided into the interior town, and the suburbs. The interior town formed an oval, surrounded by the wall built by the Sultan Sulṭān al-Maḥmūd the Magnificent and which had three fine gates: the Bāb al-Maṣrī, on the south side, which he described as "next to Bāb el Fatoūḥ, at Cairo, was the finest town-gate I have seen in the East" [137]; the Bāb al-Shāmī, on the north side; and the Bāb al-Djūm^ca, on the east side. He also added that in the south wall there was a much smaller gate, the Bāb al-Ṣaghīr, but this had been closed up [138].

According to his description, the interior part of the town consisted of 28 small quarters, called harāt or aziqa (plural of hārah and zuḳāk respectively). Although the houses had been left to decay, he noted that they were well built, and entirely of stone. They were generally two stories high with flat roofs, and some of these private houses had small gardens with wells. The



- | | | |
|--|--|---|
| 1. The great Mosque, called El Haram. | 17. Burial-ground, called El Bekya. | 31. The gate called Báb el Ambarye. |
| 2. The Prophet Mohammed's tomb, called El Hejra. | 18. Gate called Bab el Shámy. | 32. A small tower, built of the skulls of Wahabys killed when the Turks took the town. |
| 3. House of the Sheikh el Haram. | 19. Gate called Bab el Masry. | 33. Quarter of the suburbs called Es' Sahh. |
| 4. Principal Market-street. | 20. Shops and huts. | 34. A large court-yard where the caravans from Mekka halt. |
| 5. Street called El Belát. | 21. The open space called El Monákh, the halting-place of Bedouins and soldiers. | 35. A small gate called Báb Koba. |
| 6. Public School, called Medrese el Hamdye. | 22. A quarter of the suburbs called El Wadjeha, with fields and ruined houses. | 36. The bed of the Seyl or torrent. |
| 7. Street called Zogag el Towal. | 23. House of the Turkish Governor. | 37. Quarters with habitations and gardens.—a. The Quarter called El Shahrye.—b. Quarter called El Hendye. |
| 8. House of the Kadhy. | 24. A basin filled with canal water. | 38. Reservoir of water for the Syrian pilgrims. |
| 9. Ruined quarters. | 25. The best private building of the town, where the Pasha's women reside. | 39. Different wells of brackish water. |
| 10. The Castle. | 26. The mosque called Mesdjed Omar. | 40. Camp of the Syrian pilgrim caravan. |
| 10.* A small gate. | 27. Another mosque. | 41. A small dome called El Koreyn. |
| 11. A public bath. | 28. A bridge on the bed of the torrent. | 42. Date-groves and fields on three sides of the town. |
| 12. A corn magazine. | 29. The Pasha's house, with a large garden. | |
| 13. Quarter of Beni Hosseyn. | 30. Street and quarter called El Ambarye. | |
| 14. Quarter of El Agowat. | | |
| 15. Steps leading down to the canal, in different parts of the town. | | |
| 15.* Wells, at the bottom of which the canal water flows. | | |
| 16. The gate called Báb el Djoma. | | |

Fig. 2.10. Plan of Al-Medina, 1230/1815.
Source: Burckhardt, J.L., Travel in Arabia, London, 1968, (between p. 319 and 320).

streets, for the most part, were narrow, often only two or three paces (1.5 or 2.25 metres) across and a few of the principal ones were paved with large blocks of stone. Shops were concentrated along the broadest street of the town that led from the Bāb al-Maṣrī to the Ḥaram [139].

The Ḥaram was situated towards the eastern extremity of the town proper and surrounded by private houses. These were built against the Ḥaram's southern wall and the southern half of the western wall, and concealed them, while only an open street separated the houses from the Ḥaram on the remaining sides [140].

As the houses were not high, generally two stories, the dome over the ḥudjrah and the minarets of the mosque were the most dominant feature of the city's skyline. Burckhardt noticed that the dome was visible at a great distance from the city and the visitors coming to the town, as soon as they caught sight of the dome, repeated certain prayers [141].

The suburbs covered more ground than the interior town and extended to the west and south, separated from it by an open space, narrow on the south and widening on the west where it formed a large public place. This place was called and is still known as the Manākha, meaning a place where caravans alight. As indicated earlier, this area was designated by the Prophet as the sūk of the town. Burckhardt noticed that it was occupied with commercial activities. He indicated it was always crowded with camels and people and there rows of small huts and sheds in which provisions were sold, principally corn, dates, vegetables and butter. There was also a number of coffee-huts which were beset the whole day with visitors. The northern side of the suburbs, fronting the Manākha,

was open, while on the west and south they were enclosed by a wall of inferior size and strength to the interior town's wall. Four wooden doors led from the suburbs into the open country [142].

The suburbs consisted of eleven principal quarters. The quarters on the south and north-west side within the precincts of the outer wall, were composed of what is known in Al-Medina as aḥwāsh (plural of ḥwash). The ḥwash consisted of a large courtyard surrounded by thirty to forty single-storey houses with a gate which was locked at night (Fig. 1.14). The aḥwāsh were separated from each other by gardens and plantations. On the west side, directly opposite the Bāb al-Maṣrī, the quarters consisted of regular and well-built streets with houses resembling those of the interior of the town. This part was crossed by al-ʿAnbarya Street, in which the Turkish governor and the rich people lived [143].

To the north between the interior town and the suburbs was a castle surrounded by very strong walls with several high and solid towers. According to Burckhardt, it contained sufficient space for six to eight hundred people [144]. To the east was the cemetery of al-Bakī^c which was also enclosed by a wall. Gardens and plantations surrounded both the town and the suburbs on three sides leaving only the western rocky ground where cultivation was impossible. Burckhardt added that to the east and south these plantations extended to a distance of six to eight miles (about 10-13 kilometres). They consisted principally of date-groves, and wheat and barley fields, and also contained some residences for farmers and some of the towns people who made it a custom to pass the summer season there [145].

Burckhardt stated that very few public buildings and

services could be found in the town. Apart from the Haram there were: fifteen mosques; only two public schools, one in the street of al-Blāt and the other near to the Mosque; a corn-magazine in the southern quarter of the interior town and a public bath in the same quarter. He indicated that there were no public khans in the town. Instead, the inhabitants of the city let out apartments to visitors, who come to the town at all times of the year [146].

Finally, Burckhardt claimed that at the time of his visit, the population of Al-Medina was, at most, between 16,000 to 20,000. Of this number about 10,000 or 12,000 lived in the interior town, and the rest in the suburbs [147]. With respect to the physical condition of the town in general he indicated that "It is, on the whole, one of the best-built towns I have seen in the East, ranking, in this respect, next to Aleppo" [148].

The only enlargement of the Mosque during the Ottoman era was carried out after three and a half centuries of their rule. It is reported that because of the decadence of the building the Sultan 'Aabduľmadjīd I (1255/1839 - 1277/1861) ordered it to be renewed and enlarged. The work, which was carried out in stages as the building was in use during the construction, was started in 1265/1848 and completed in 1277/1861. Most of the building was demolished and reconstructed. The only parts which were left undisturbed were the ḥudjrah, the mihrāb, the minbars, the southeastern minaret and parts of the northern and western walls. The southern hall, which was roofed in the form of a succession of little domes, was extended 5.25 cubits (2.6 metres) to the east in order to enlarge the space between the ḥudjrah and the eastern wall. It was also expanded to the north by adding two new

porticoes in the courtyard. A large dome, painted green in colour, was built above the hudjrah (plates 2.10 and 2.11). The number of colonnades to the north and east of the courtyard was reduced to two each instead of three, while ~~those~~ those to the east of the courtyard became three instead of four. An area to the east of the courtyard was enclosed by a wooden screen and formed the praying-place for the women (Fig. 2.9).

Against the northern wall of the Mosque offices or a Koranic school, a new public gate (the Bāb al-Madjīdī), store-rooms and facilities for ablution were built on the ground floor, and offices and additional ablution facilities on the upper floor. The original four gates, together with a new one, continued to give access to the building, and the number of minarets remained at five. After the completion of the construction, the interior of the building was decorated with calligraphic work containing verses from the holy Koran and other religious texts, as well as artistic work in the form of trees, fruits and gardens [149].

After these developments the length of the Mosque from north to south measured 126.25 metres. As the two long walls in this direction converged upon one another as they extended northward, the southern wall measured 86.25 metres and the northern one was 66.00 metres [150]. The area of the building was 10,301 square metres [151].

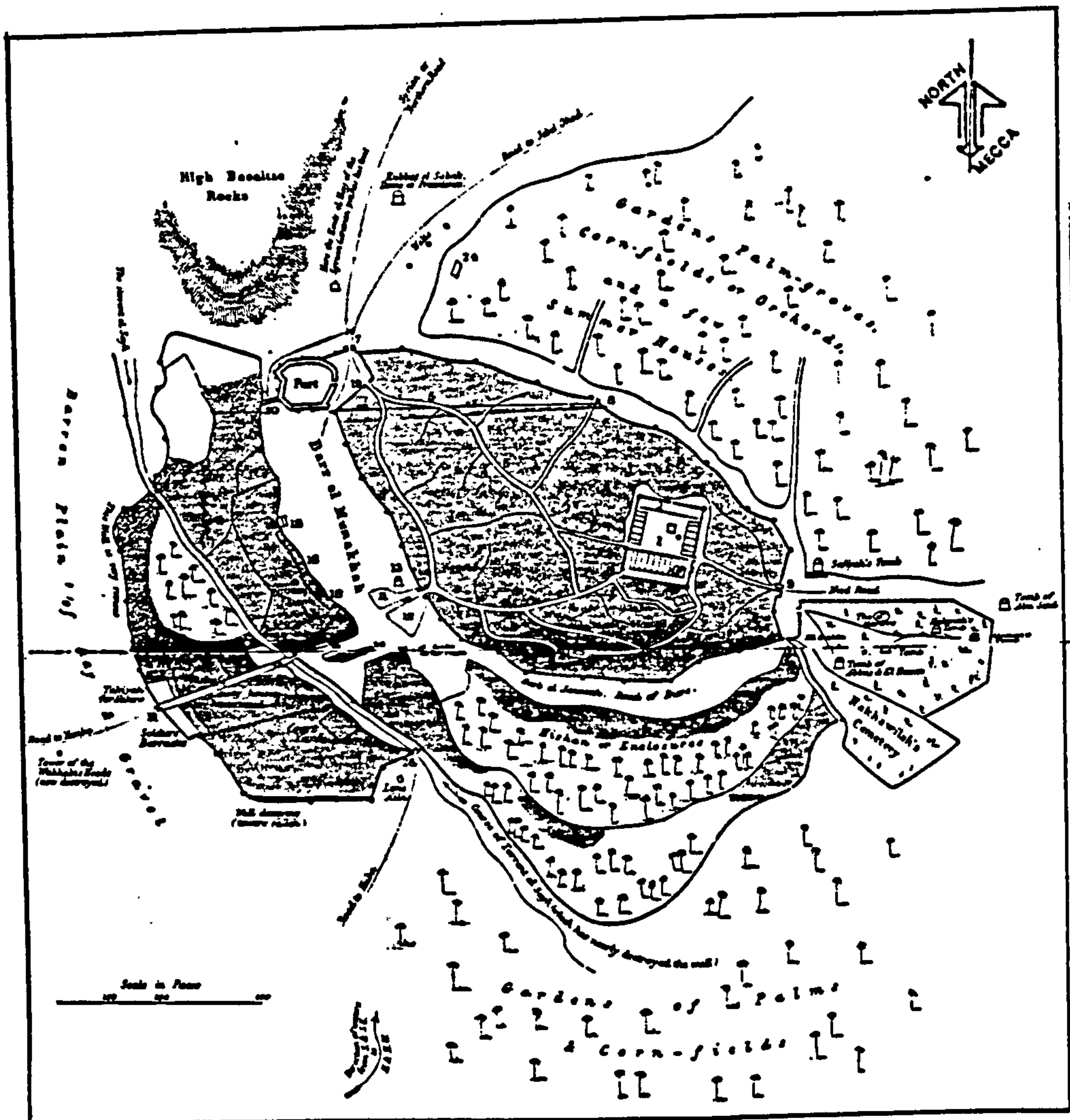
In the long-term this enlargement apparently influenced the growth of the city in general. The great amount of money, 750,000 Madjīdī pounds [152], that was spent on the project proved to be of great benefit to the area. It resulted in the attraction of outside skills and the improvement of local facilities.



Four years after the beginning of the reconstruction of the Ḥaram, in 1269/1853, Burton visited the town, drew a map and described it (Fig. 2.11 and Plates, 2.1, 2.2 and 2.3) [153]. Although the main outlines of the picture he drew were much the same as the older one given by Burckhardt, there were some signs of new development. The new map shows an additional gate to the north, Bāb al-Ẓyāfa, and a new street leading to it. Burton also indicated that at the time of his visit there were four wakālas (caravanserais) used principally as stores, and in addition to the great bazaar, the street leading from the Bāb al-Maṣrī in the interior town's wall to Bāb al-Salām of the Mosque, he mentioned two specialized aswāk. The sūk al-Khuḏarya, greengrocers' market, and the sūk of al-Ḥabāba, the grain bazaar, were both located in the Manākha next to the Bāb al-Maṣrī.

Burton also indicated that the city contained between fifty and sixty streets, including the alleys and cul-de-sacs, and the main ones radiated towards the Mosque. Latticed balconies, rwāshin, were very common to the streets of the town. The number of houses, according to his estimation, was 1,500 within the interior town and 1,000 in the suburbs, whilst the population of the city was estimated at 16,000, of which 9,000 occupied the interior town, and 7,000 the suburbs and the fort [134].

Three decades after Burton, Ibn Mūsa, a resident of Al-Medina, gave us another description of the town in his manuscript, dated in 1303/1886 [155]. His description shows that there was a considerable improvement in local services. He indicated, for example, that there were 31 schools, 8 public libraries, 2 ḥamāms (public baths), 2 hospitals and 24 public and



- | | | |
|---|---|---|
| 1 The Haram or Prophet's Mosque | 10 The Miski (Egyptian) Gate | 18 House occupied by wealthy & noble citizens |
| 2 Unfinished Porch to North | 11 The Suk al Khumayrah (Green-grocer's bazaar) & Coffee houses | 19 Outward to Castle |
| 3 Palace of Principal Officers of Mosque | 12 The Suk al Habbabah or Green bazaar & Coffee houses | 20 Bab al Saghir or Little Gate |
| 4 Street leading to the Bab al Salam (it is the principal Bazaar) | 13 A Sabil or Public fountain | 21 The gate called Bab al Ambara |
| 5 Great Street El Balah | 14 The Prophet's Musalla or Prayer place | 22 The Suburb-street called El Ambariyah |
| 6 A Wakal'ah | 15 The Mosque of Omar | 23 Large house formerly inhabited by Pasha |
| 7 The Shame Gate | 16 Large house, formerly belonging to the Governor | 24 Pasha's present abode |
| 8 The Ziyafah Gate | 17 Shaykh Hamid's house | 25 Bridge over the Tarrans al Sayh |
| 9 The Jumrah Gate | | 26 Little gate, called Bab Kuba |

Fig. 2.11. Plan of Al-Medina, 1269/1853
 Source: Burton, R.F., Personal Narrative of a Pilgrimage to Al-Medina and Meccah, New York, 1964, V.I, (between p.392 and 393).

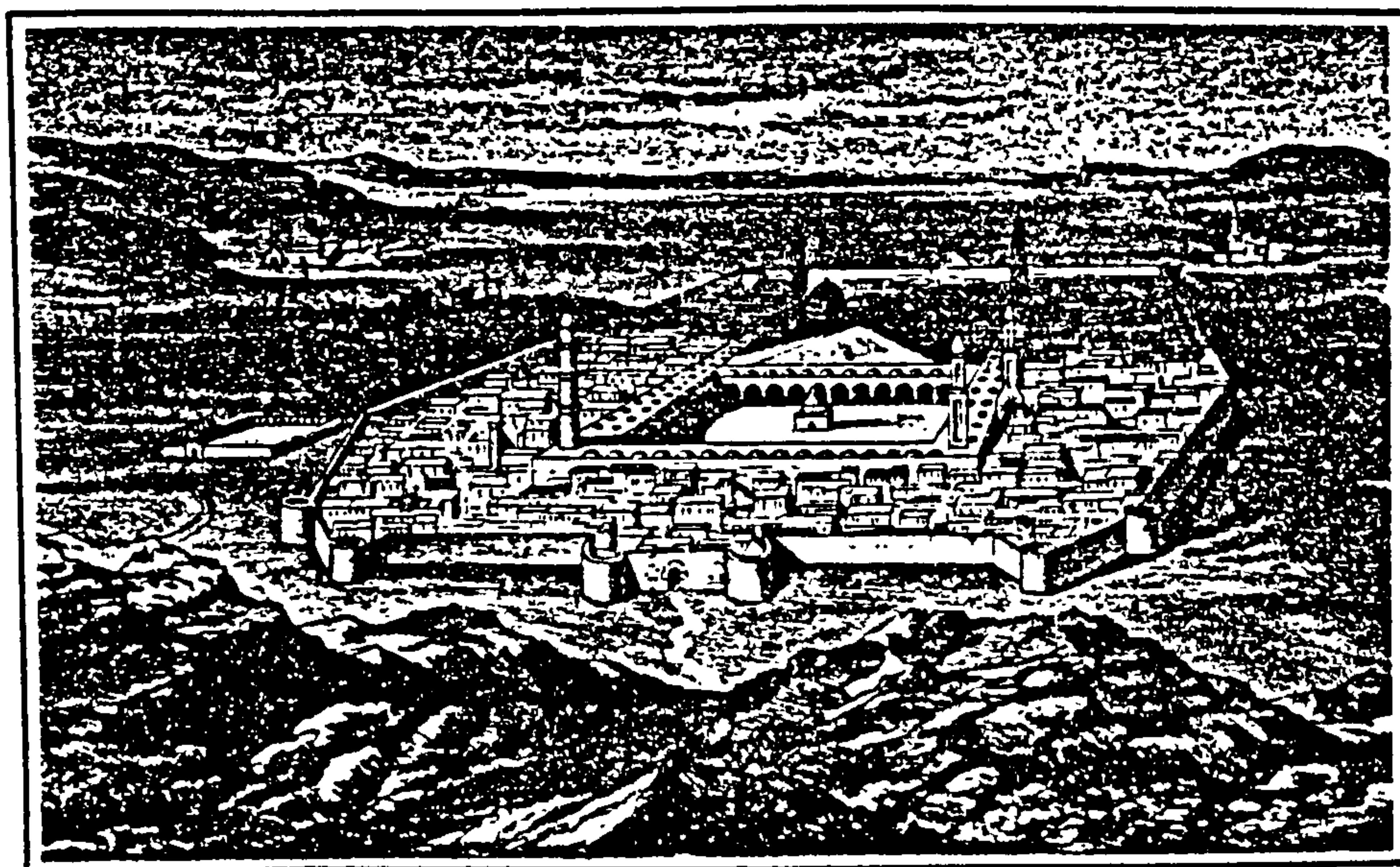


Plate 2.1. Al-Medina, a sketch by a native artist.

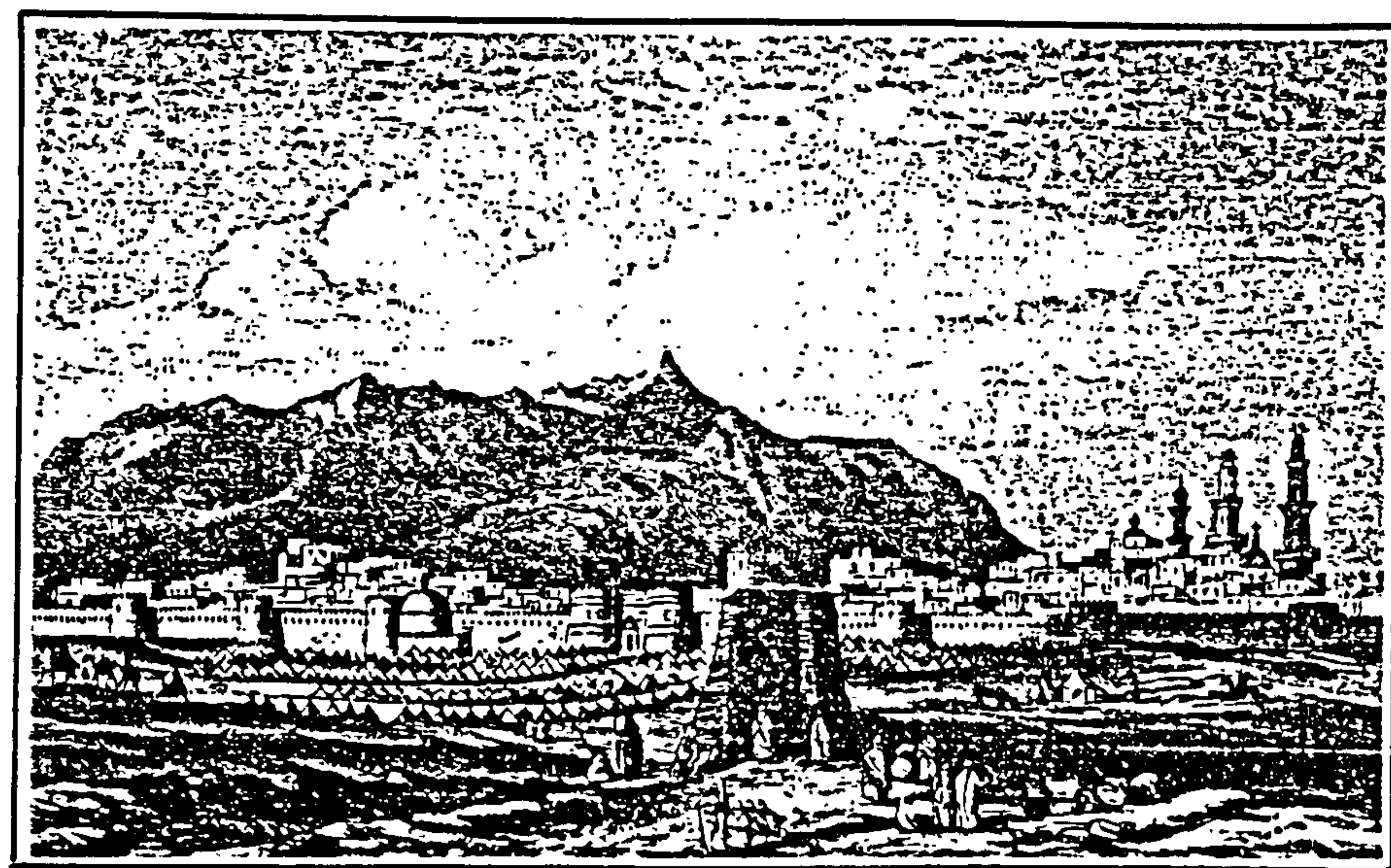


Plate 2.2. Al-Medina, a general view 1269/1853.

Source: Burton, op. cit. (opposite to pages 392 and 377).

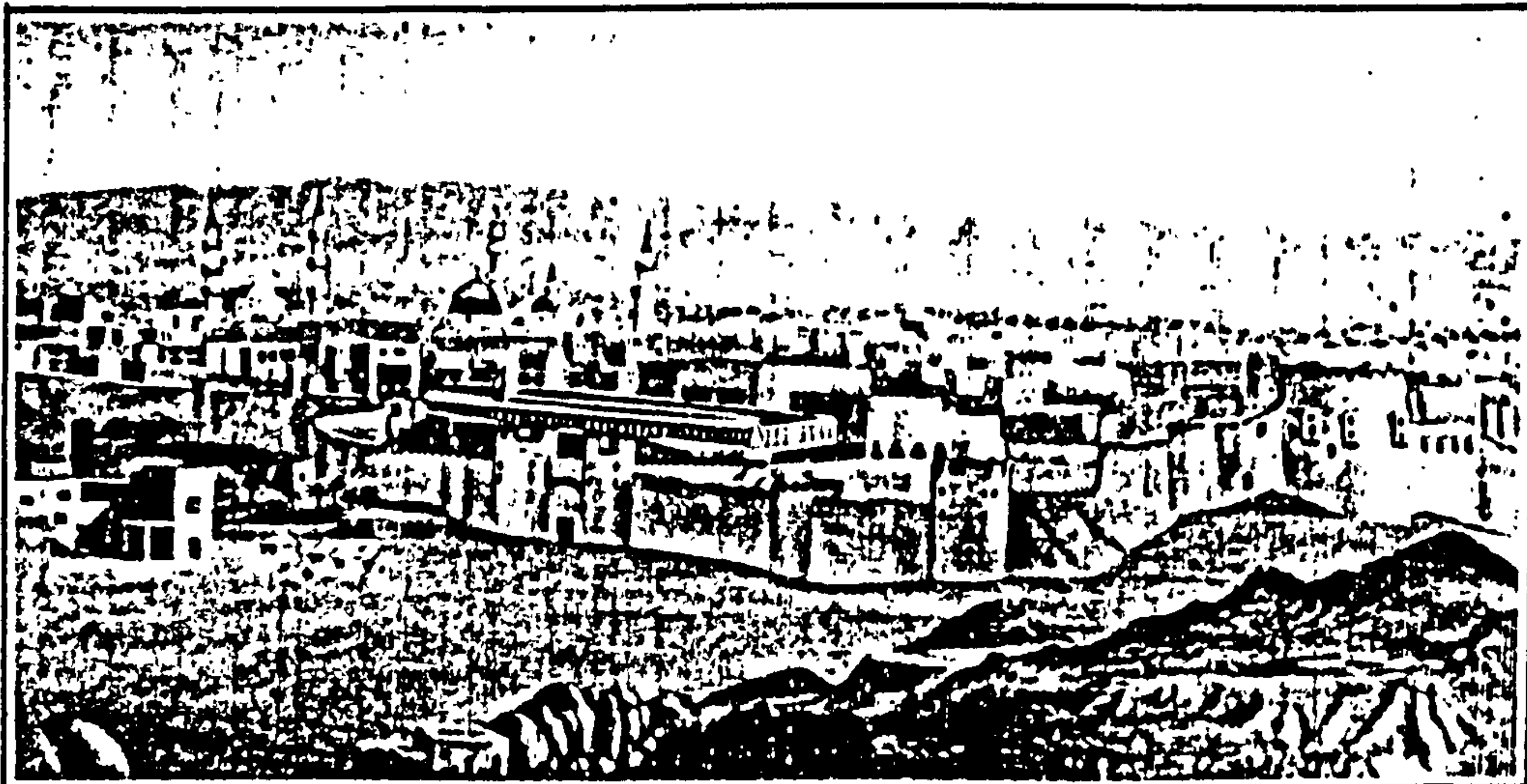


Plate 2.3. Al-Medina, a general view showing the south-west side of interior city-wall, the interior town and the Manākha, 1300/1882-3.

Source: Ḥāfiẓ, ʿAlī, Fusūl Mīn Tārīkh al-Medīna, Jeddah, 1405/1985, p.36.



Plate 2.4. Al-Medina, Bāb al-Maṣrī, in the interior wall, 1326/1908.

Source: Rīfʿat, op. cit., V.I., Plate 136.

private gardens within the city. It also seems that this period was characterized by the development of commercial facilities. It is reported that there were eleven specialized aswāk in the Manākha, in front of the Bāb al-Maṣrī. In addition to the sūk of the greengrocers and the grain bazaar which were mentioned by Burton, there were also, in the Manākha, the aswāk of the sellers of dates, oil, meat, spices, textiles, livestock, grass, coal and fire-wood and blacksmiths. Within the interior town, moreover, was the sūk of the al-Shurūk, specializing in ṣabby (the traditional Arabian outer robe or cloak), and the sūk of the tailors. These branched from the great bazaar, leading from Bāb al Maṣrī to the Haram that was mentioned by al-Samhūdī, Burckhardt and Burton as the main commercial street of Al-Medina.

Also at that time some upward growth was observed in the suburbs. While Burckhardt and Burton had indicated that the aḥwāsh, in the suburbs, consisted of single-storey houses, Ibn Mūsa reported that they comprised single and two-storey houses, Fig. 2.14.

At the beginning of the twentieth century A.D., we have another account by Rif^ᶜat, who visited the town four times between 1318/1901 and 1325/1908 [156]. He described the outer and the inner walls of the city and indicated that each one had five gates (plates 2.4 - 2.8 and 2.10). He also added that the inner wall was restored and raised to 25 metres and fortified with 40 towers by the Ottoman Sultan ᶜAbdulazīz in 1285/1868. The streets of the city were narrow; the main ones were not more than four metres across, while the alleys were less than 2 metres in width. The buildings were, at best, built of stone. Most of them were multi-storey

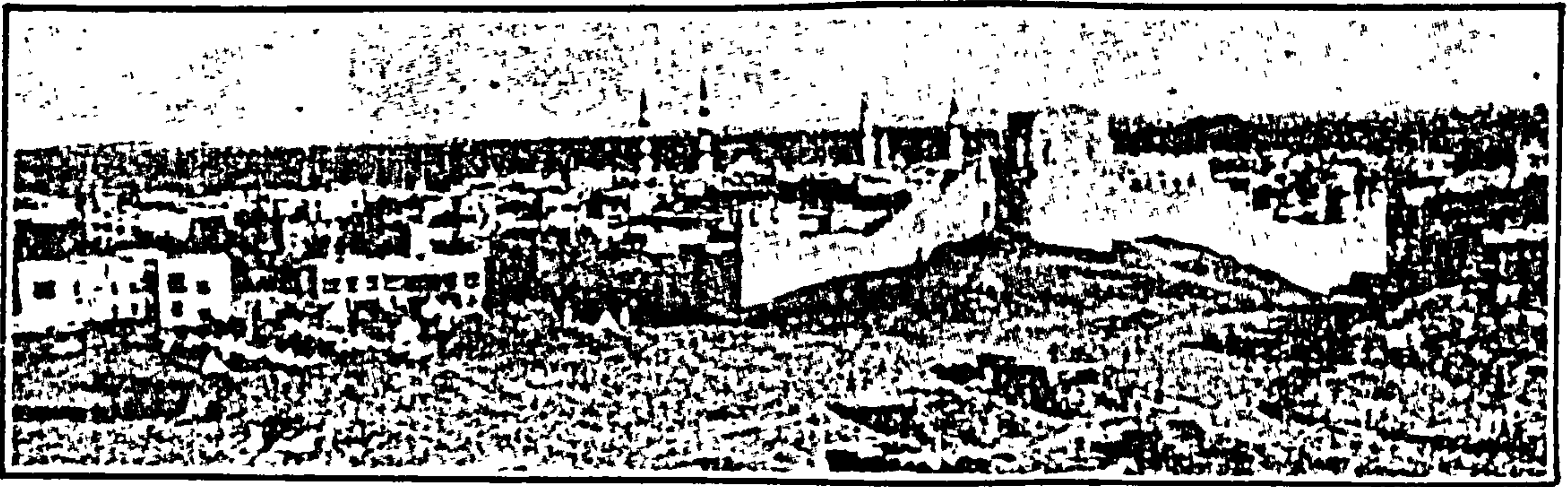


Plate 2.5. Al-Medina, a general view, as seen from the north-west side, 1326/1908.

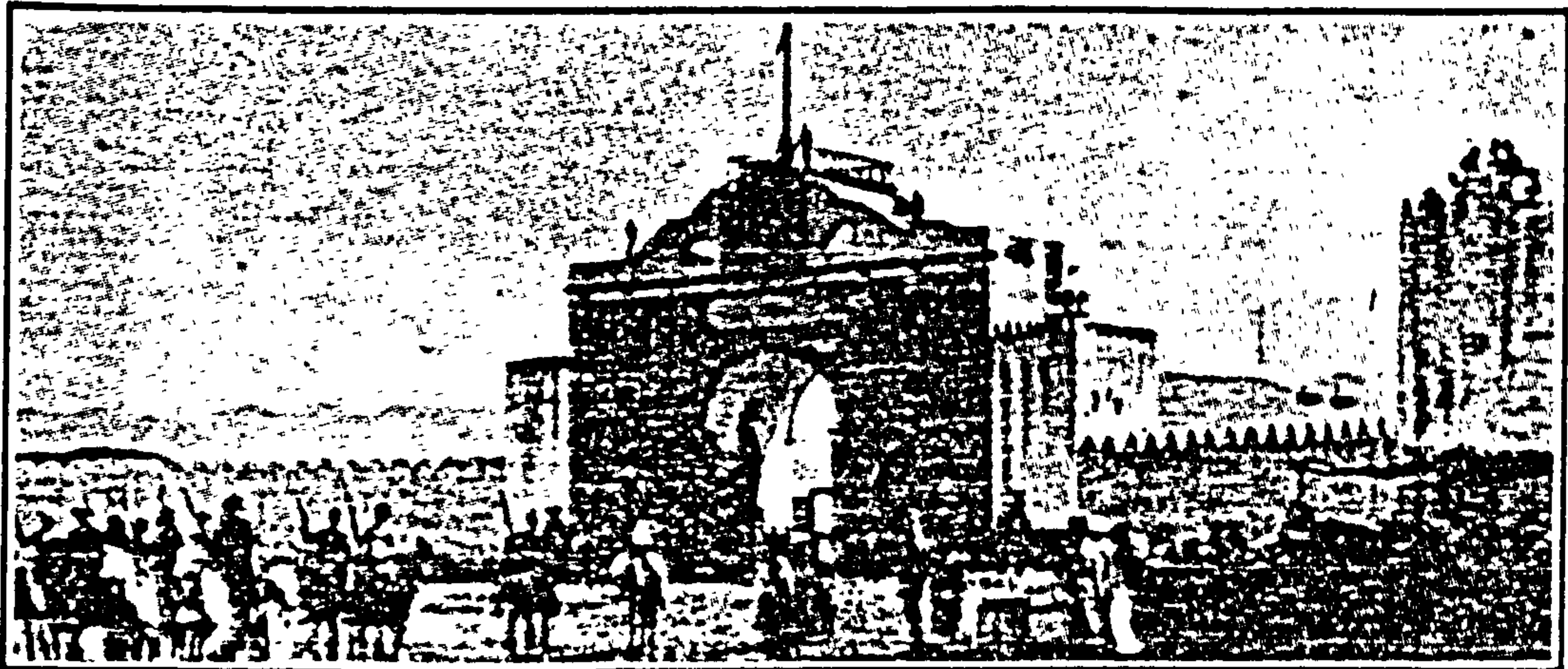


Plate 2.6. Al-Medina, Bāb al-ʿAnbarya in the exterior wall, as seen from outside the town, 1326/1908.

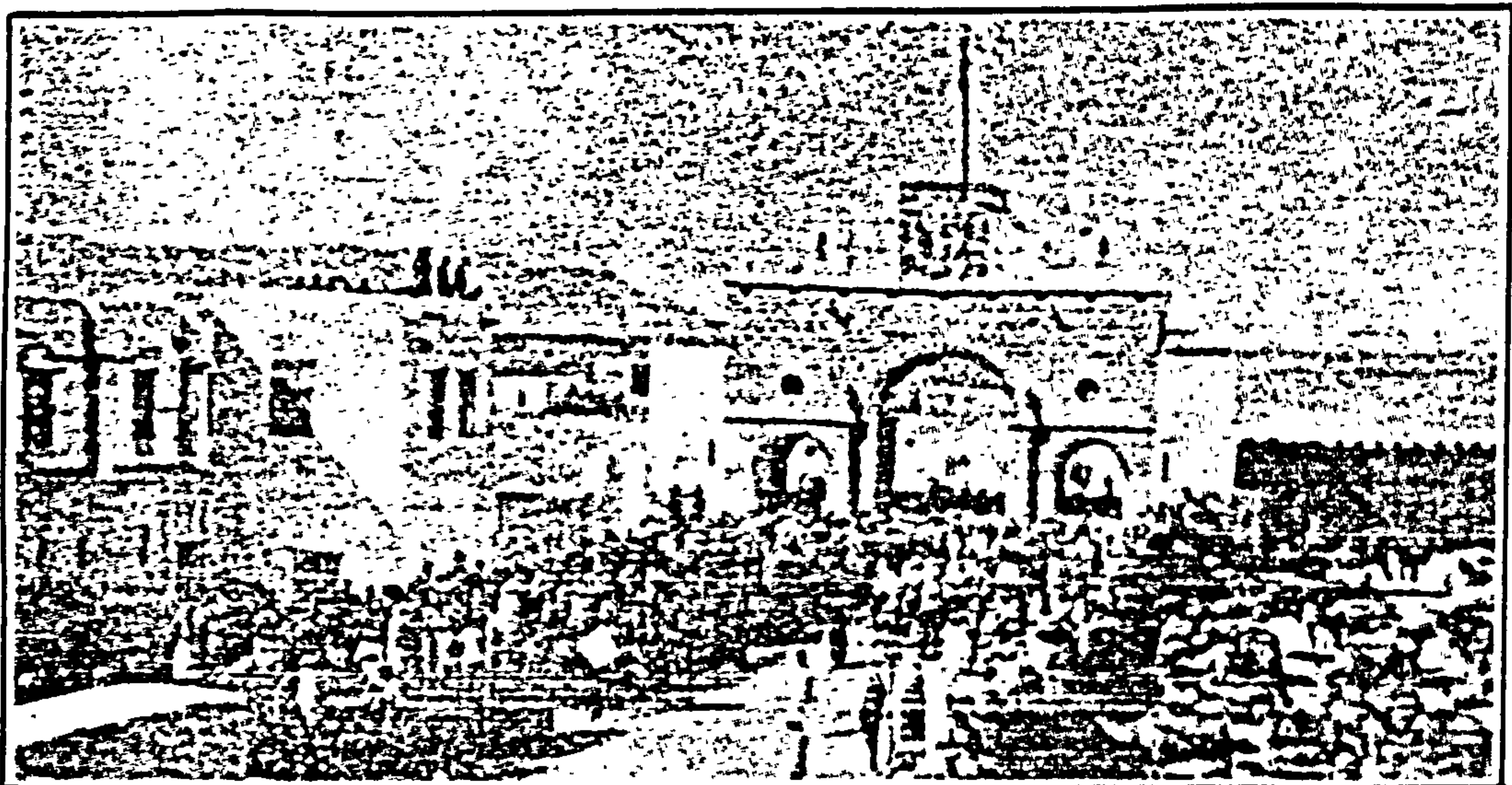


Plate 2.7 Al-Medina, Bāb and the street of al-ʿAnbarya, as seen from inside the town, 1326/1908.

Source: Rifʿat, op. cit., (V.I., Plate 161, V.II Plates 204).

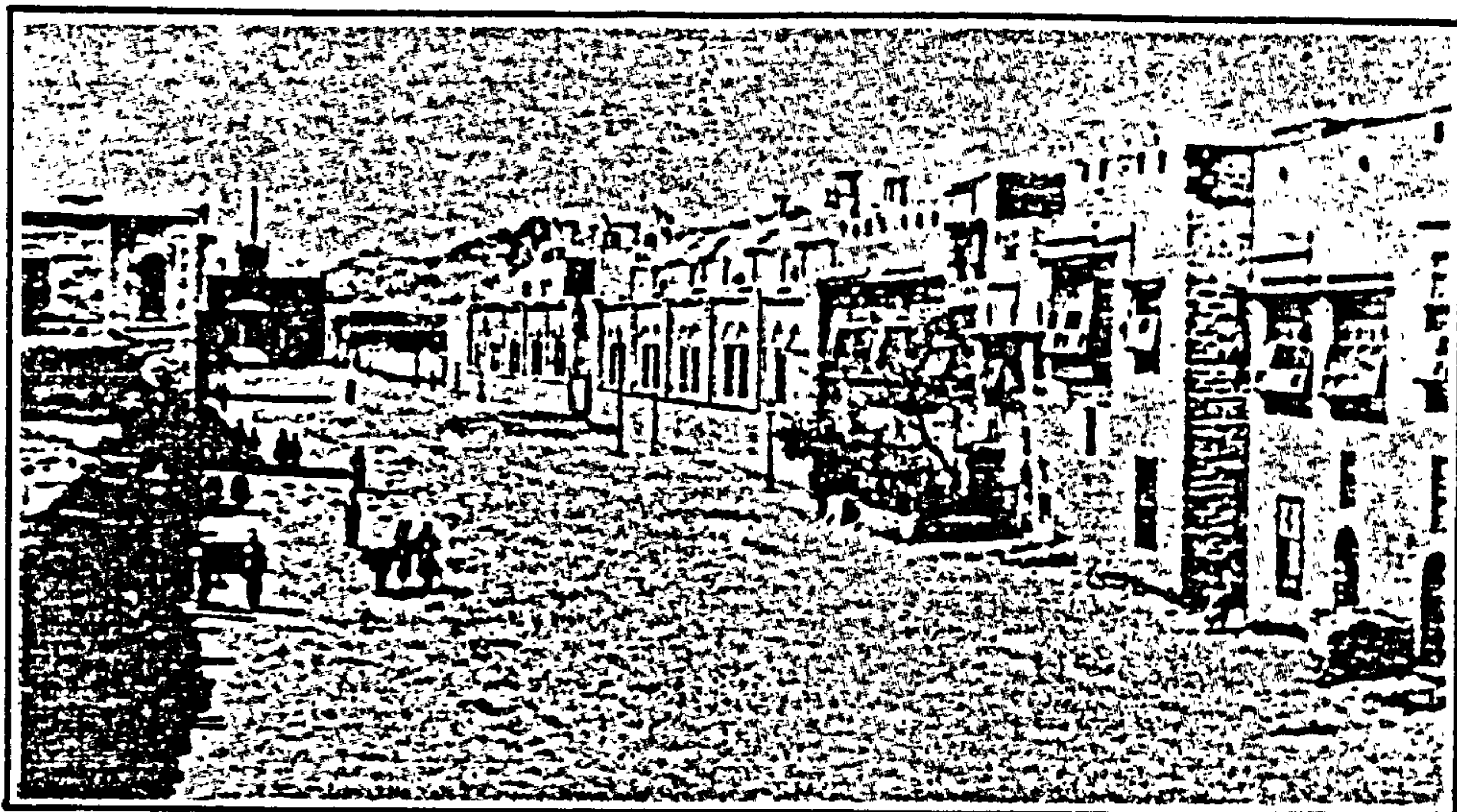


Plate 2.8. Al-Medina, the Street of al-^cAnbarya, 1332/1914.

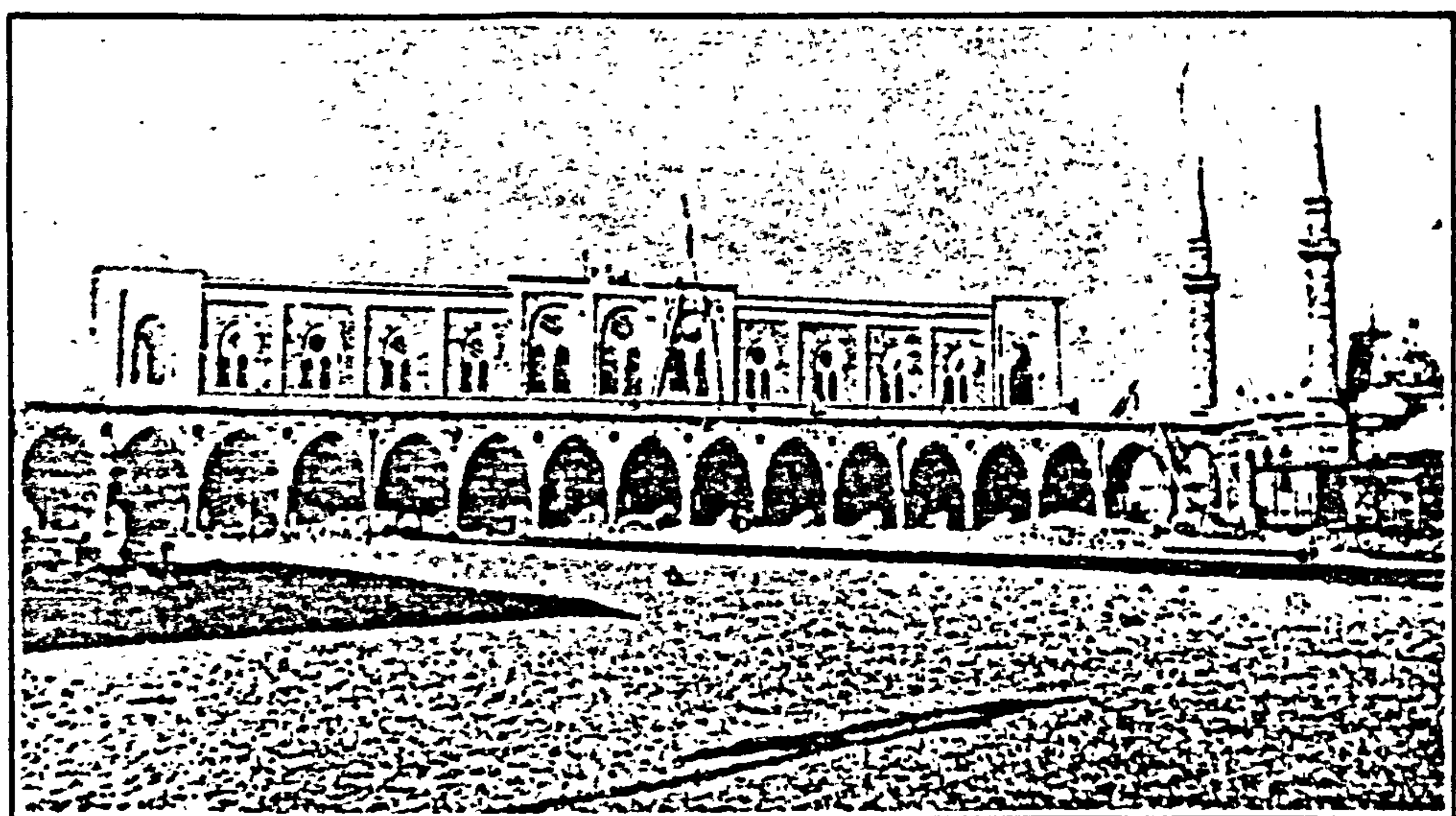


Plate 2.9. Al-Medina, the Railway Station, 1332/1914.
Source: Mostafa, op. cit., p.28, Figs. 11 and 12.

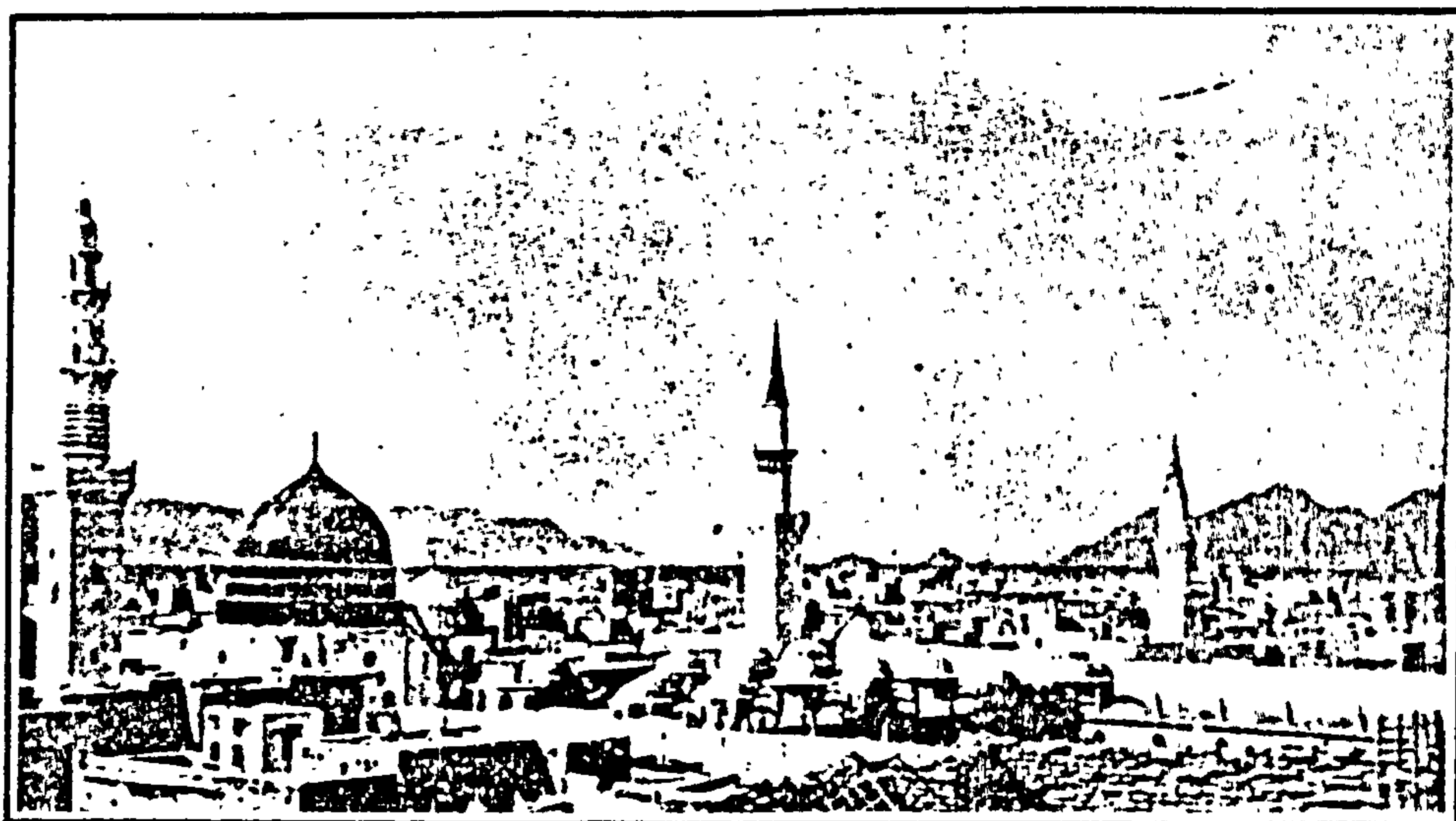


Plate 2.10. Al-Medina, general view of the Mosque and the interior town, 1326/1908.

Source: Rīf'at, op. cit., V.I., Plate 183.

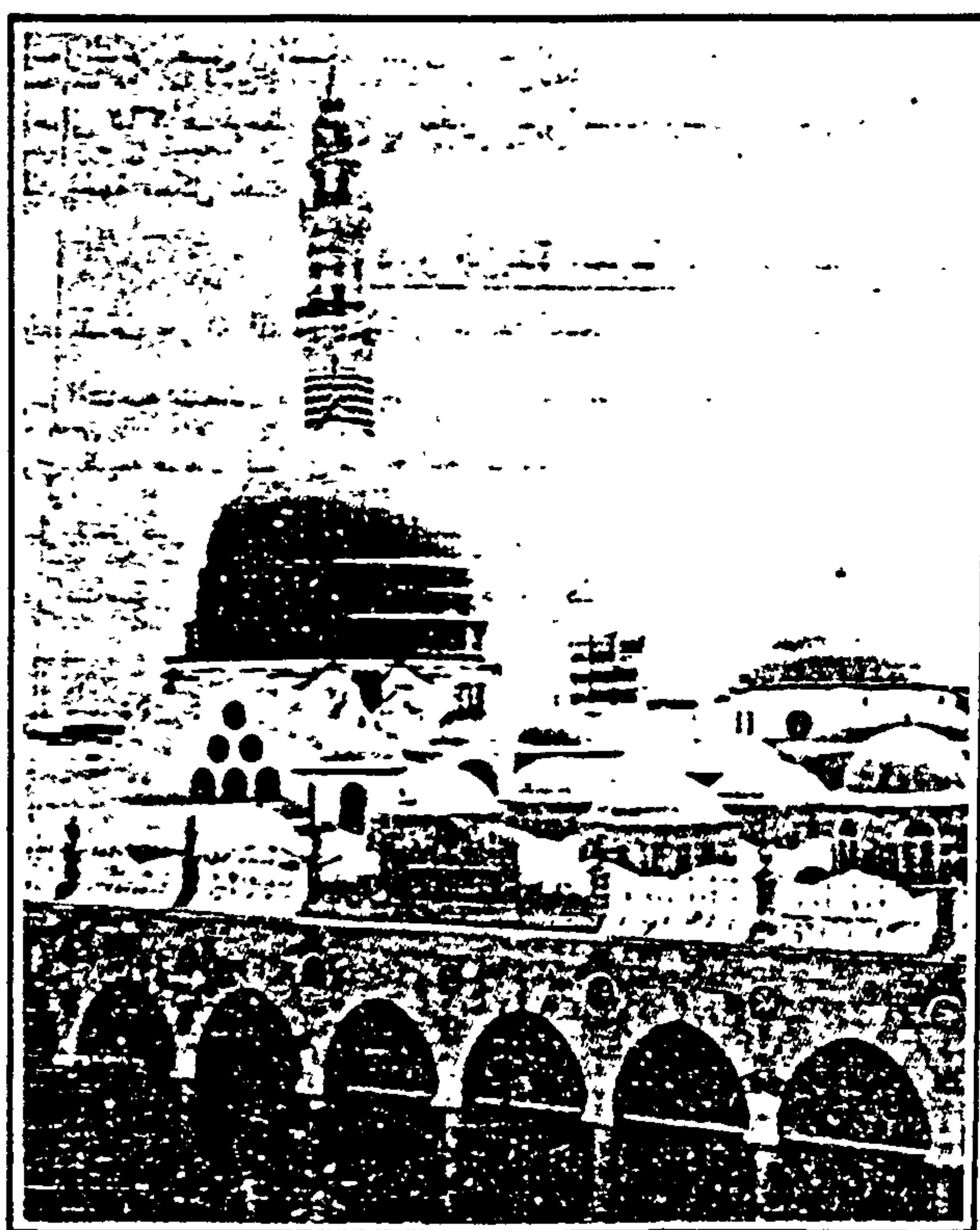


Plate 2.11. Al-Medina, the Haram after its restoration by the Sultan 'Abdulmadjīd (completed in 1277/1861).

Source: Hāfīz, op. cit., p.89.

(two, three or more storeys high) without inner courtyards. The ground floors were usually occupied by shops which were often one metre up from the ground. The houses of the notables were well built and their facades were covered with rwāshīn. He gave the total number of houses in the city as 4,000. With respect to community services, it is reported that there were 17 mosques (apart from the Haram), 18 public libraries, 19 schools, a hospital and two hamāms, while the number of shops was 932, and there were also 4 wakālas in the city.

One of the most important factors that influenced the city's growth at this time was the construction of the Hidjāz railway [157]. The line was begun in 1318/1900 at Damascus, and was brought to Al-Medina in 1326/1908. The railway station was built outside the city, to the south-west, next to Bāb al-^ʿAnbarya (plate 2.9). Because of this development, the inland travelling time from Damascus to Al-Medina was reduced from about 40 days by caravan, to only three days by rail [158]. Thus, North African pilgrims changed their traditional route to the holy areas from the sea via Jeddah or Yanbu to Syria.

This development in communications together with the instability in the north resulted in the emigration of some of the Turks and the Syrians to Al-Medina [159]. This led to an almost threefold increase in the population of the city in six years, from 30,000 in 1326/1908 [160] to 80,000 in 1332/1914 [161]. It also contributed to the growth of the economy of the area as well as the urban expansion of the town which took place in the north.

This prosperity however, did not continue for long. The railway line, originally it seems was intended to service the

pilgrims and the holy cities, but it also had some military and political importance in giving the Turkish ruler a new means by which he could tighten his hold on the area. As such, the line was the object of attacks after the Sharīf of Mecca, Ḥusayn b. ʿAlī, revolted against the Ottomans in 1334/1916 and ultimately the trains were stopped and parts of the line blown up in 1335/1917 [162]. Several efforts were made later on by the Saudi, Jordanian and Syrian governments towards its reconstruction but these were unsuccessful [163]. However, it has now been replaced by a highway network that operates between the Saudi cities and neighbouring countries.

The Ottoman troops continued to stay in Al-Medina until January 19th, 1919 after the end of World War One. With the evacuation of the Turks, the city fell into the hands of the Sharīfs who ruled until it was taken over in Djumāda I 19th, 1344/December 5th, 1925 by ʿAbdulʿazīz b. Saʿūd who had already entered Mecca in 1343/1924 [164]. The two holy cities were thus incorporated into the Saudi state, later called the Kingdom of Saudi Arabia.

As far as the urban morphology was concerned we have a description and a map by Rutter who visited Al-Medina in 1344/1925 [165]. He indicated, as did the earlier accounts, that the city consisted of the interior town of an oval form protected by a high strong wall with nine gates, and the south and south-western suburbs which were also surrounded by a wall with five gates (Fig. 2.12). The two portions were separated by an open area, the Manākha, and the fort, to the north. The two walls enclosed some two square miles (about five square kilometres), considerably less than half of which lay within the inner wall. Outside the northern wall stood

many palaces, built by wealthy Turks and others who settled in the town after the opening of the railway line. To the south-west of the city, beside the Bāb al-‘Anbarya, was situated the railway station, whose rectangular walled enclosure projected outside the outer city wall (Plate 2.9). In the north of the town there was a third wall of mud and stone which began at the north-east corner of the Ottoman wall and followed a northerly direction, then it continued westward as far as the telegraph compound (Fig. 2.12). It was known as the Husyn's wall, after the Sharif Husyn of Mecca, who built it during his rule to protect the anticipated northern city expansion.

In regards to the streets, Rutter reported that they were very narrow apart from the principal ones. In particular, in the quarter of al-Aghwat, the oldest part of the town located to the west of the Haram, the streets were so narrow that two men, walking on foot, could not pass one another without turning sideways (Fig. 2.13, and Plates 2.12 and 2.13). These streets were roofed and small holes were made to admit light and air into their dark interiors. In enquiring about the reasoning behind these arrangements, Rutter was told by the residents that they built their houses so close to protect themselves from the simūm, the dry burning wind in the summer.

Among the principal streets of the town he indicated, the Sūk Street, ran from the Bāb al-Maṣrī to the Bāb al-Salām of the Haram, and was lined with small shops, which occupied the front part of the ground floors of the houses. Parallel to this street ran another commercial one, al-‘Aaynia, which was opened during the reconstruction of the Mosque under the Sultan ‘Aabdu^lmadjīd



Fig. 2.13. Al-Medina, the streets in al-Aghwāt's quarter, the oldest quarter in the city, (demolished in 1405/1985).
Source: Group of Arab Consultants for Development and Reconstruction, Project No. 202, Report No. 13, p.41.

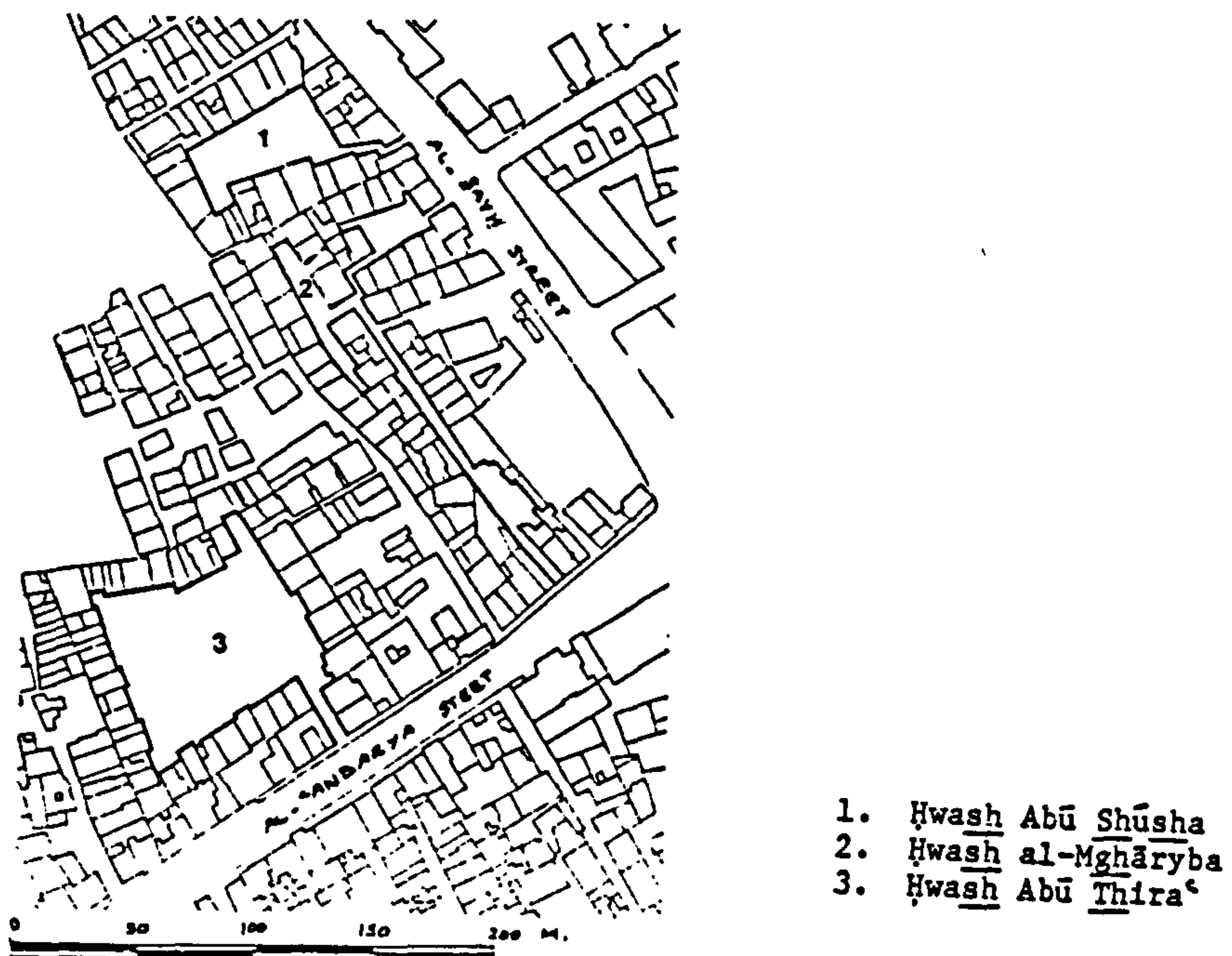


Fig. 2.14. Al-Medina, some ahwāsh in al-^cAnbarya area, outside the internal wall.
Source: Ṭaha, Ḥatīm, Ṭiba Wa Fanahā al-Rafy^c, Al-Medina 1984, p.65.

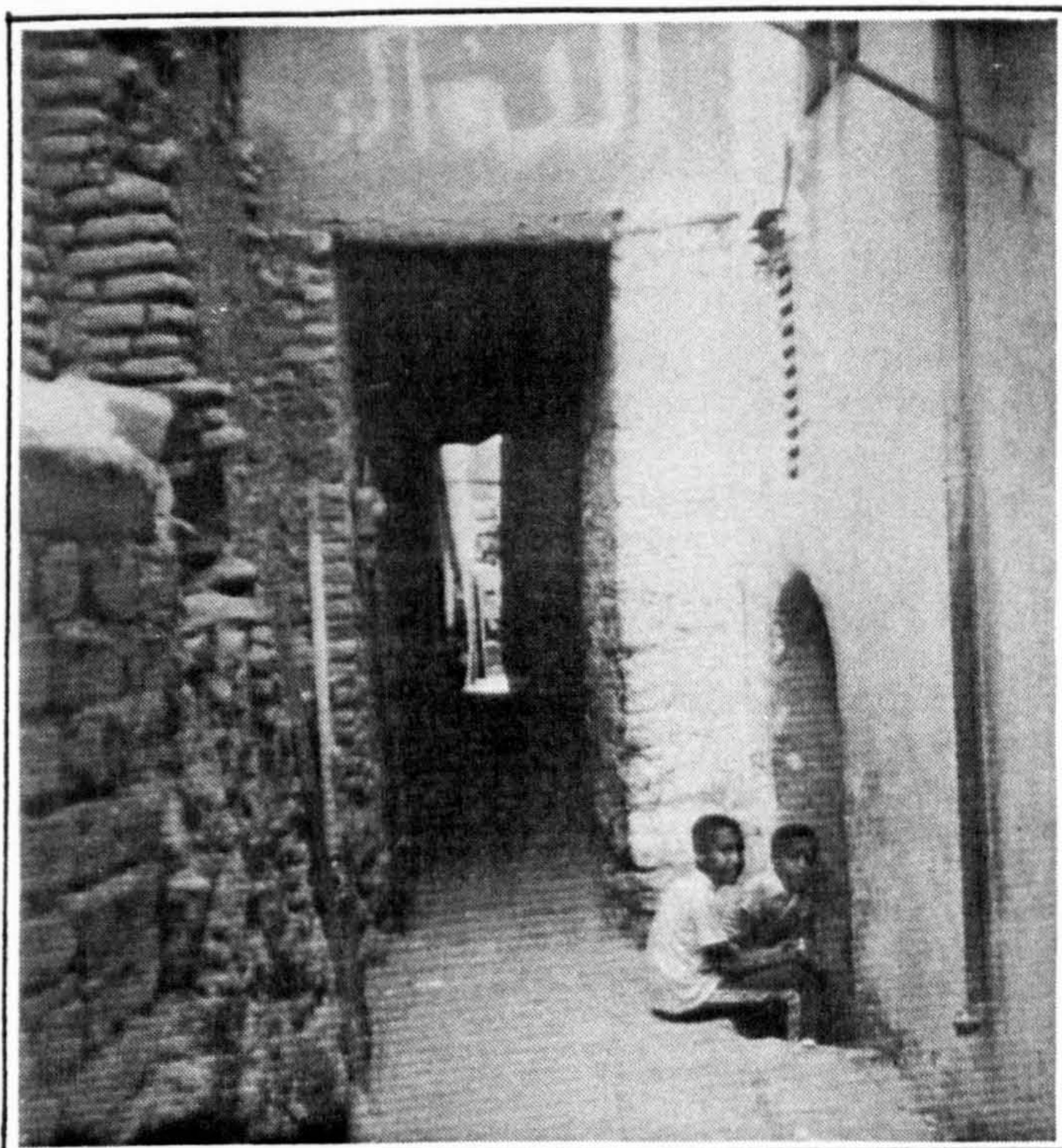


Plate 2.12. Street in the quarter of al-Aghwāt (this photograph was taken just before the demolition of the area in 1405/1985).

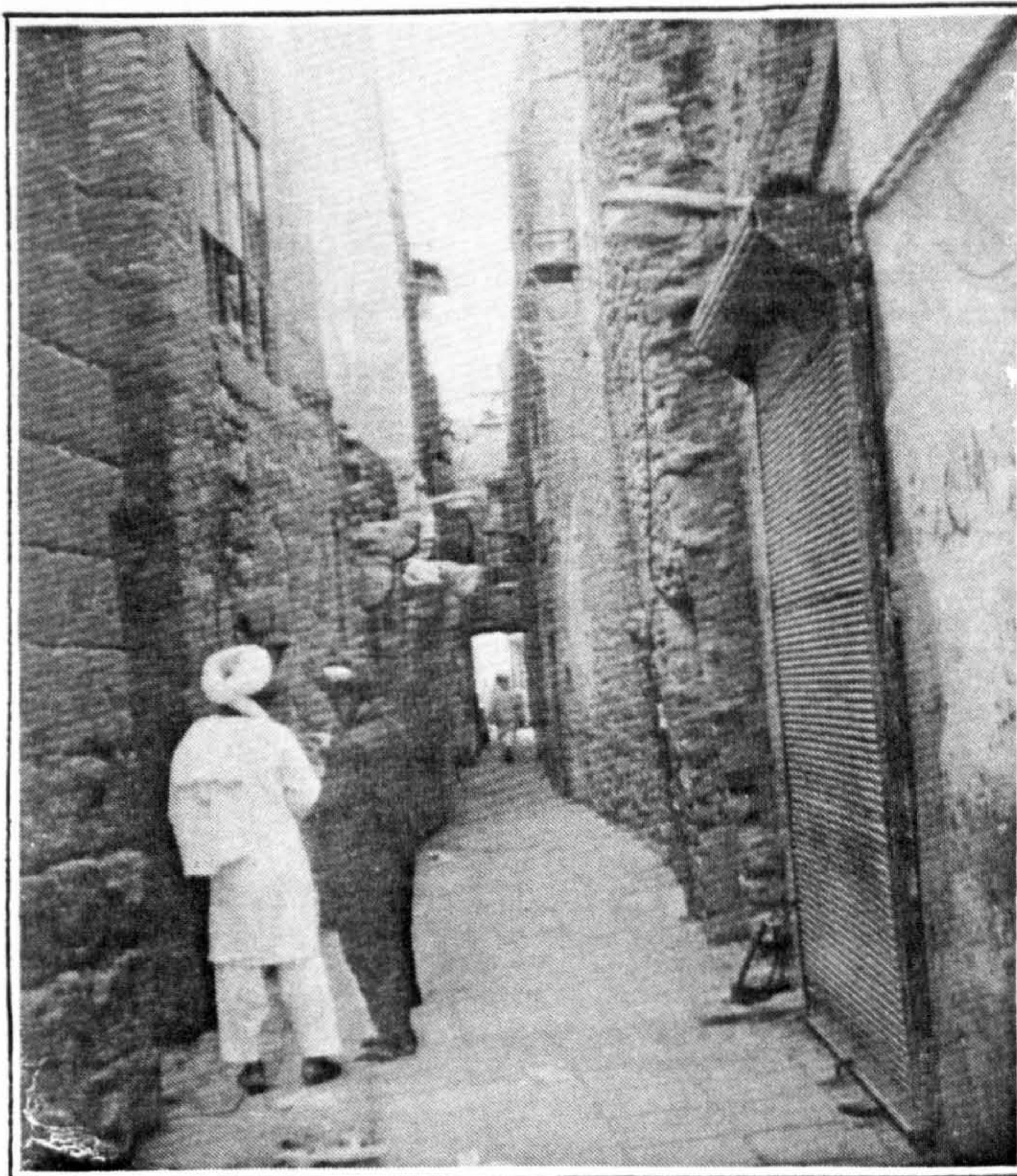


Plate 2.13. Street in the quarter of al-Aghwāt (this photograph was taken just before the demolition of the area in 1405/1985).

(1255/1839 - 1277/1861) for transporting columns and stone blocks from Wadī al-‘Aḳīḳ.

Rutter's map shows a new open area to the north of the Haram. It was said to have been made by the Commanding General of the Turkish forces, ‘Umar Fakhrudīn Pāsha, just before the Turks' withdrawal from the city, in order to defend the Mosque [166].

In regards to the population of the city, Rutter indicated that it fell from 70,000 or 80,000 at the end of the Ottoman rule to only 6,000 at the time of his visit, as a result of the struggle in the city between the Turks, the Sharifs and the Saudis [167].

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12. Mostafa, op. cit., p. 52.
13. It should be mentioned here that the mosque of Ḳubā' was not the first mosque built in Al-Medina. The early Muhadjirūn (immigrants, those Meccans who embraced Islam and emigrated to Al-Medina) and the Anṣār built mosques in the city before the arrival of the Prophet. Djābir said "We stayed in Al-Medina for two years before the arrival of God's Messenger, may peace be upon him, in which we built mosques and observed prayers". al-Samhūdī, op.cit., vol.I, p. 250.

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CHAPTER THREE :

THE DEVELOPMENT OF THE RELATIONSHIP BETWEEN THE PROPHET'S MOSQUE AND ITS SURROUNDINGS IN THE SAUDI ERA

Seven years after the submission of the Al-Medina to King 'Abdul'aziz, who had confirmed his rule and position in both Nadjd and Hidjāz, the unification of the country under the Kingdom of Saudi Arabia was announced, in Djamād I 21st, 1351/ September 23rd, 1932 [1]. Perhaps the most important result of the new regime was the introduction of security, peace and stability to the Arabian Peninsula. Previously to that the area suffered from internal war and the fear of raids on urban areas and on the camel caravans by Beduins [2].

At the beginning of the Saudi rule the state was in a poor financial condition. The economy was confined to the limited revenues from the yearly influx of pilgrims to the holy places, livestock raising by Beduins and primitive agriculture [3] with an estimated 90 per cent of the population subsisting as nomads and peasant farmers [4]. Oil was first discovered in commercial quantities in 1357/1938, but World War II prevented its full exploitation. During the six years following this discovery the Kingdom's total annual revenues did not exceed \$4 million. However, by 1368/1948 they had risen to \$85 million giving the government more capital to invest in national development [5]. Since then the state's mainly oil-based revenues continued to rise rapidly, particularly in the 1970s.

The four-fold increase of oil prices after the October 1973

Arab-Israel conflict brought about a phenomenal improvement in the national economy. The government's revenues jumped about six-fold in two years. They rose from SR.15,325 million in the fiscal year 1972-73 to SR.41,705 million in the fiscal year 1973-74 and SR.100,103 million in the fiscal year 1974-75 [6]. These trends continued in the late 1970s and the beginning of the 1980s and in the fiscal year 1982-83 the government budget increased to its highest level, SR.313.4 billion [7].

The rapid development of the national economy of the Kingdom, amongst other factors, led to a profound change in the social, economic and physical structure of Al-Medina, as with all other parts of the country.

Three distinctive stages in the development of Al-Medina during the Saudi reign can therefore be identified: the early Saudi era; the developments in the 1950s and 1960s; and the developments in the 1970s and 1980s.

3.1 THE EARLY SAUDI ERA (1344/1925-1370/1950)

As a result of the security which distinguished the Saudi period from that of the Sharifs and the end of the Ottoman rule, many of the Medinese who had left the city during the struggle amongst these three powers, returned to it. The population grew from about the 6,000 recorded during the visit of Rutter in 1925 [8], to 15,000 according to the estimate of Philby in 1931 [9].

However, as far as the urban morphology and the relationship between the Prophet's Mosque and the city were concerned, it seems

no significant change took place. The account of H. STJ. B. Philby, an Englishman who visited the city three times in 1931, 1935 and 1938, gives a similar picture to that described by the earlier writers [10]. In describing the uniquely inspiring experience of approaching the City of the Prophet, to which every Muslim looks forward, and which was recorded by the early writers, Philby, who travelled by motor car, wrote:

"From afar off - perhaps some ten miles as the crow flies - I looked down for the first time on the city of the Prophet, set in a grey-blue blur of rock and desert in which at that distance it was impossible to distinguish the long thick line of palms of the oasis from the low ridges of out-poured lava that almost completely girdle it with their oval frame within an outer setting of granite and basalt mountains. Of the city itself nothing stood out but the slender spires of the Prophet's mosque - a beacon flashing its message of faith and hope far and wide to west and east and north and south. They were our guide for the rest of the journey as we sped down the slope between scattered basalt kopjes towards the pleasant little palm-groves of Abyr'Ali ... " [11].

As to the structure of the town itself, Philby indicated that it was divided into three parts - the city (the interior town), the camp (the Manākha) and the annexe (the suburbs), (Fig. 3.1). These were enclosed together by an outer wall, forming roughly an oval with a length of about 1,676 metres from east to west and a width of about half this distance from north to south. The interior town with its Ottoman walls still intact, occupied the northern half of the city, (Plate 2.1), whilst the central feature of the interior town, not far from its eastern extremity, was naturally the Prophet's Mosque.

The mosque stood out as the chief architectural feature not

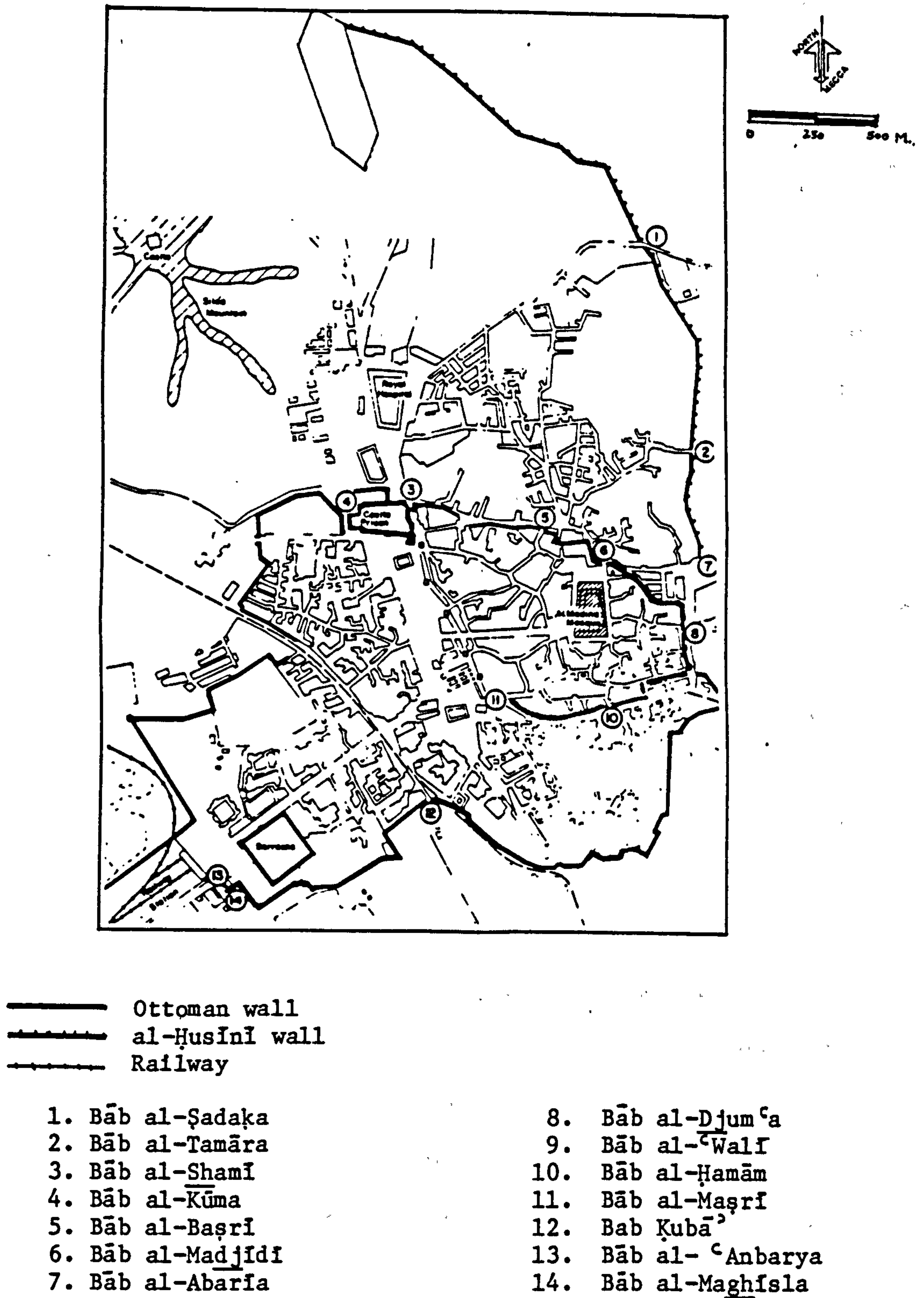


Fig. 3.1 Plan of Al-Medina, 1947.

Source: Makki, M.S., Medina, Saudi Arabia, a Geographic Analysis of the City and Region, England, 1982, p.36.

only of Al-Medina, but of all Arabia, and despite some overcrowding of building round its southern side it had the merit of being visible from several points outside the city walls. (Plates 3.3-5).

The annexe (suburbs) occupied the southern and western part of the city. It was crossed by the main street of al-^ʿAnbarya which led from the railway station, situated outside the city wall to the south-west, to the Manākha area. Philby noticed that apart from the houses which were located along this street, buildings in this part of the town were in a ruinous state, as a result of the decline in the population and in the number of pilgrims visiting the city at that time.

The camp area (Manākha) occupied the area between the interior town and the suburbs. It was still, as in the early times, used as a stopping place for caravans, and for camping (plate 3.6). Whilst around it grew up houses, and hostel accommodation for visitors. To the east of the area, near to the Bāb al-Maṣrī, were some aswāk, mainly specializing in country produce such as fruit, vegetables and meat. To the south were the offices of the chief of police, the town hall and some old mosques, while to the north lay the fort dominating the Manākha area on one side and flanking the great north road on the other (plate 3.2).

The street that led from Bāb al-Maṣrī to the Haram was still, as indicated by the early writers, the principal sūk of the city. Next to it, along the new thoroughfare al-^ʿAynīa Street, some shops grew up, set back behind roofed arcades (Plate 3.8). Old buildings were concentrated mainly in the quarter of al-Aghwāt, to the south-west of the Haram. The earliest date recorded on a building in this area according to Philby, went back as far as

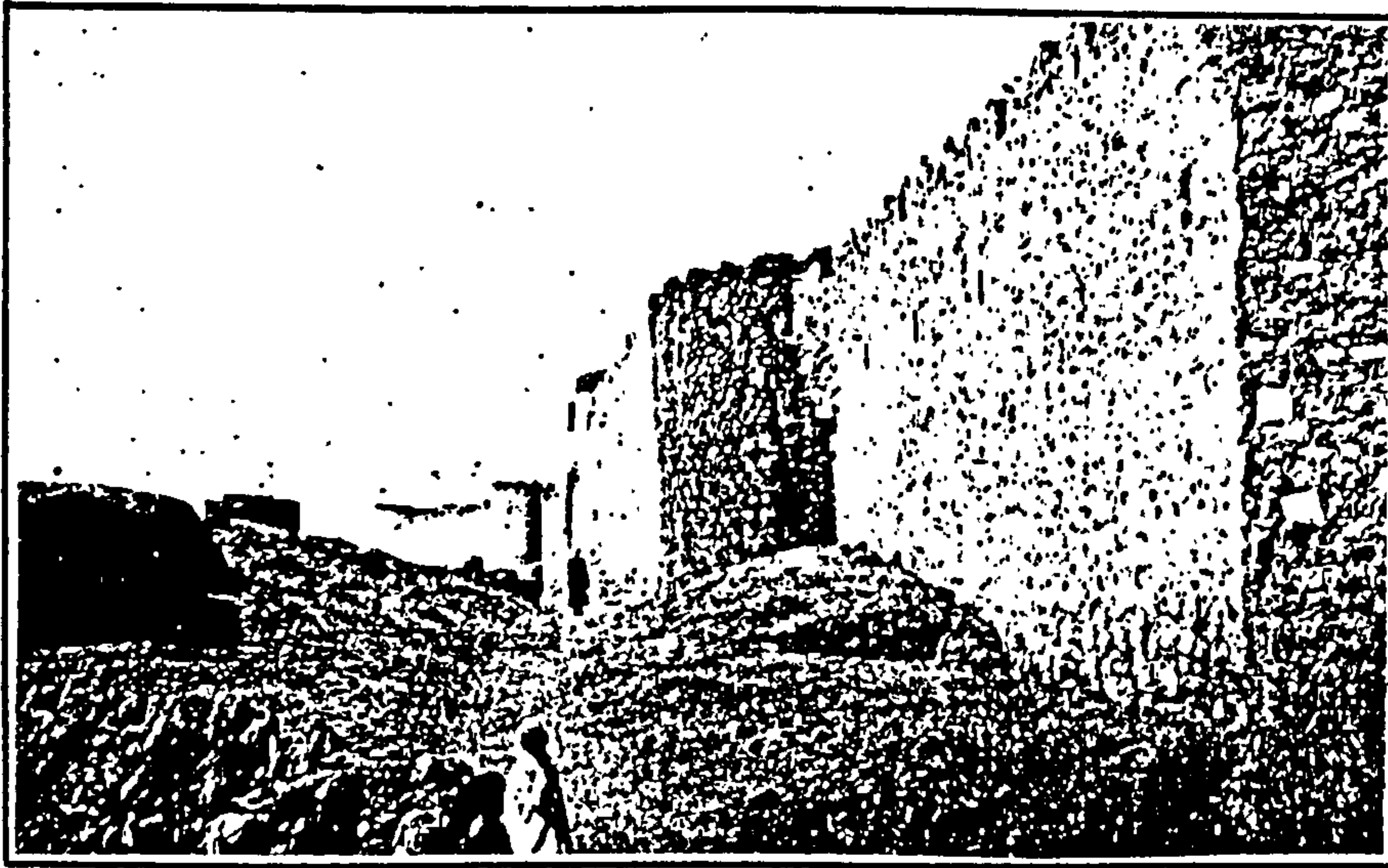


Plate 3.1. Al-Medina, the old Ottoman city-wall, 1931.
Source: Philby, H., STJ, A Pilgrim in Arabia, London, 1946.

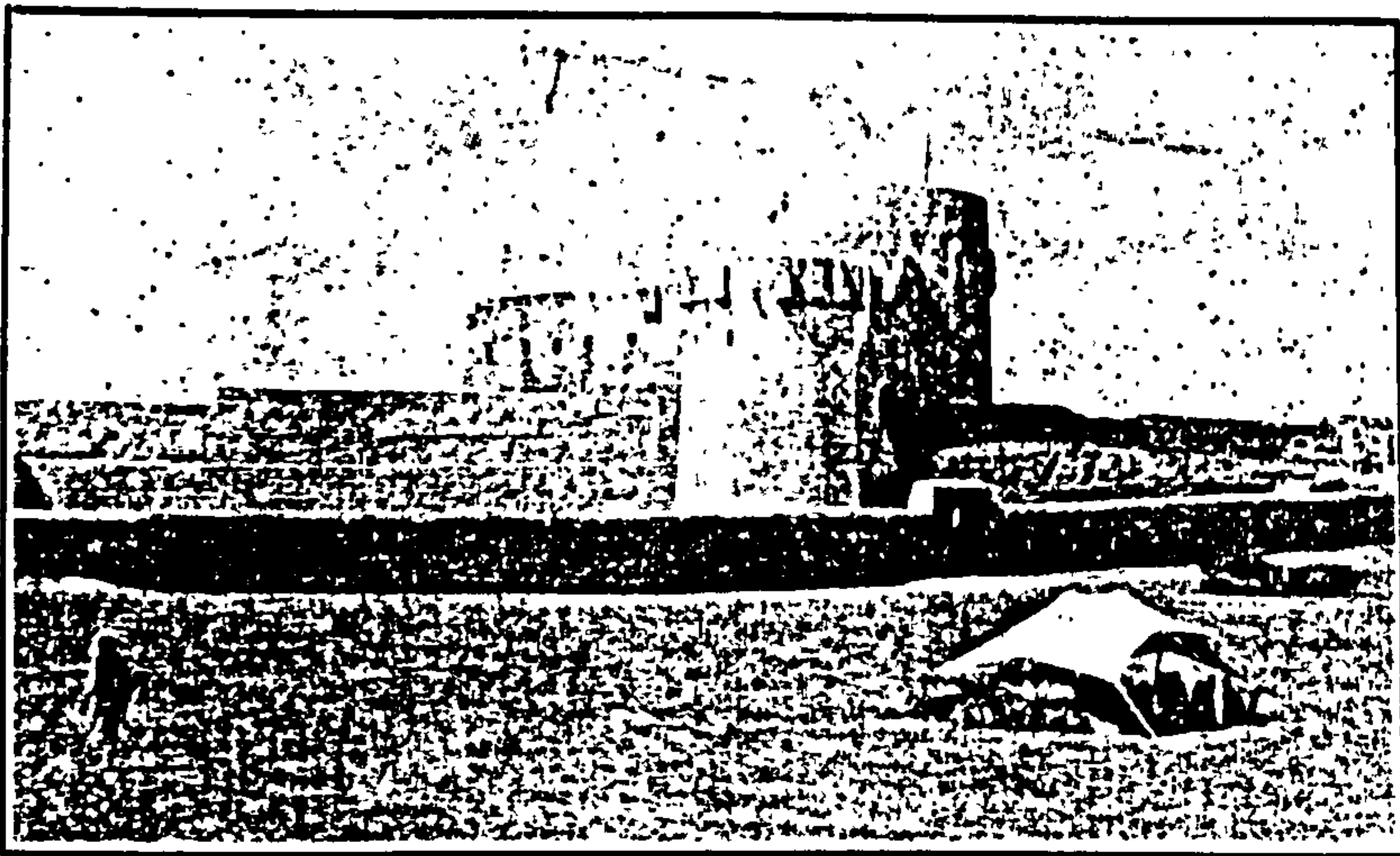


Plate 3.2. Al-Medina, the principal fort, 1931.
Source: Ibid.

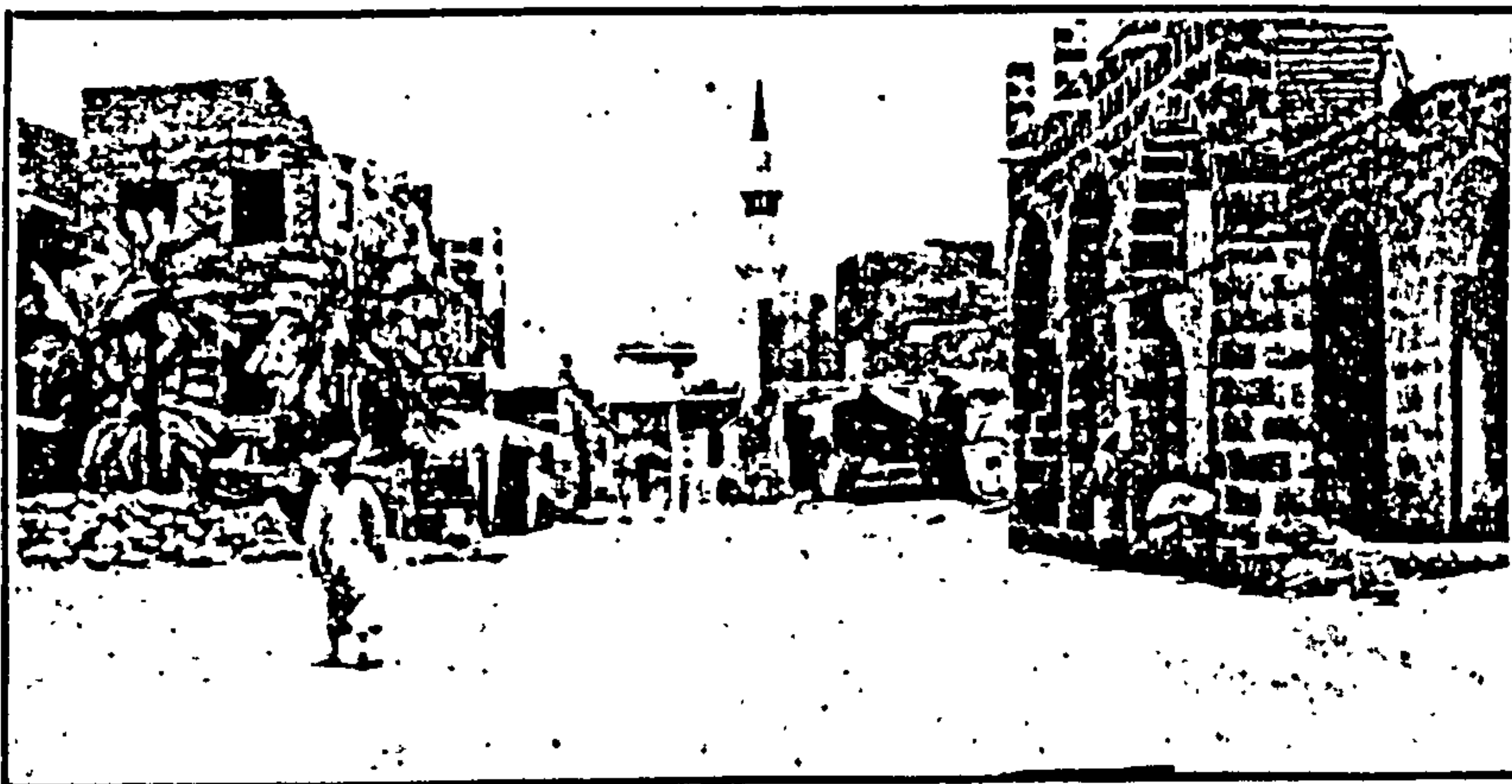


Plate 3.3. Al-Medina, a street leading to the Haram, 1931.
Source: Ibid.

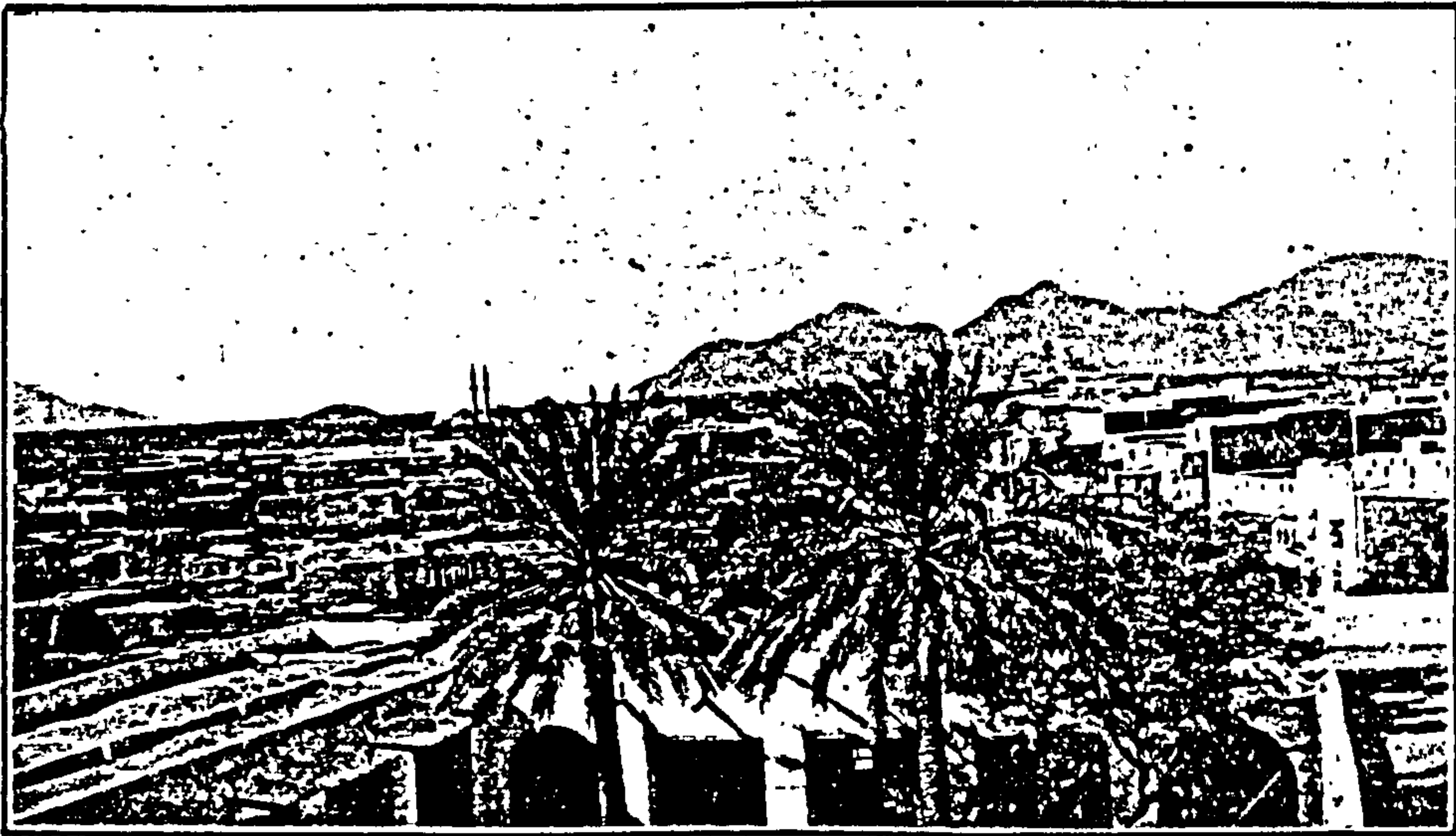


Plate 3.4. Al-Medina, a general view: looking west, 1931.
Source: Philby, op. cit.

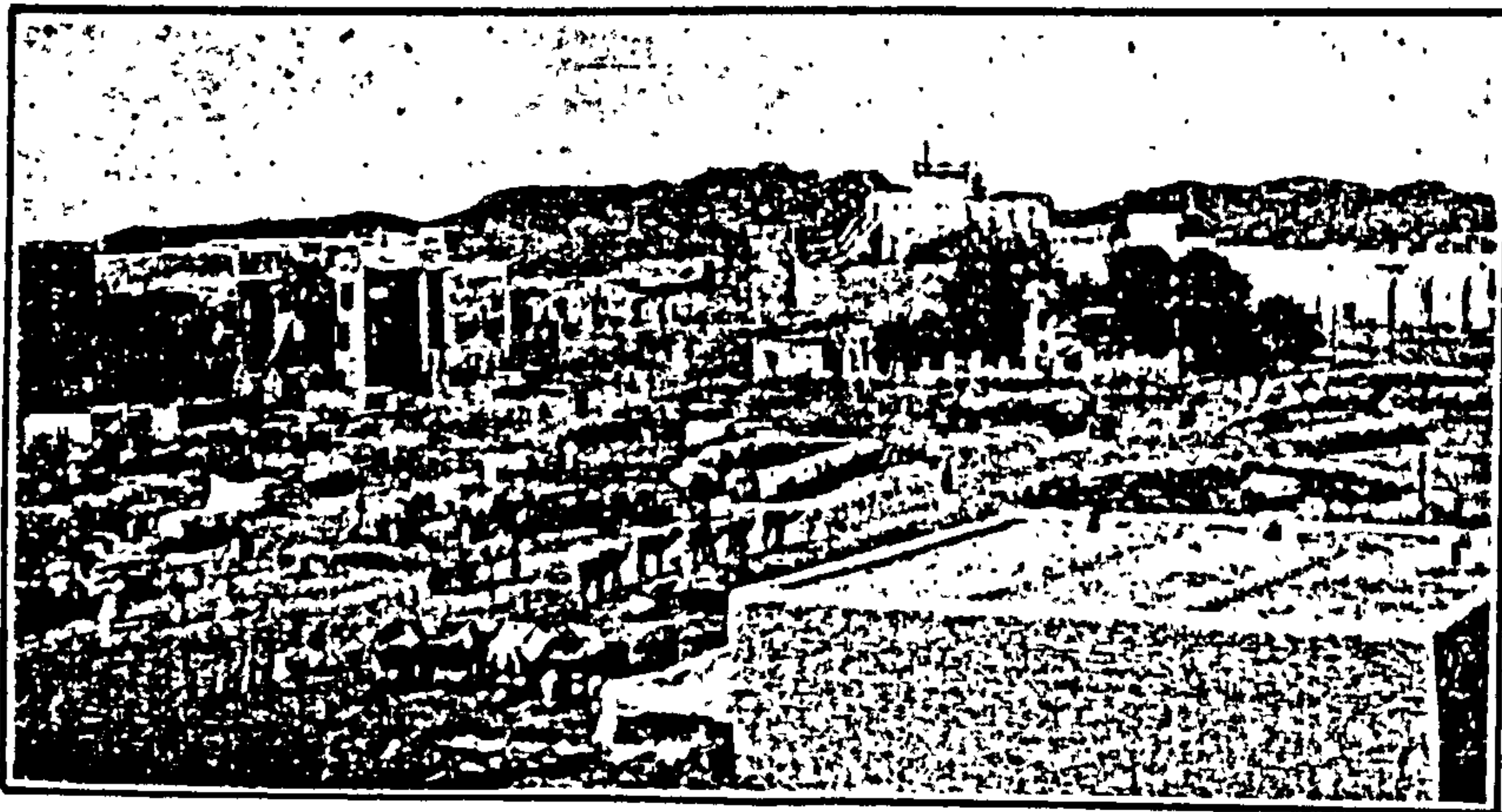


Plate 3.5. Al-Medina, a general view, 1931.
Source: Ibid.

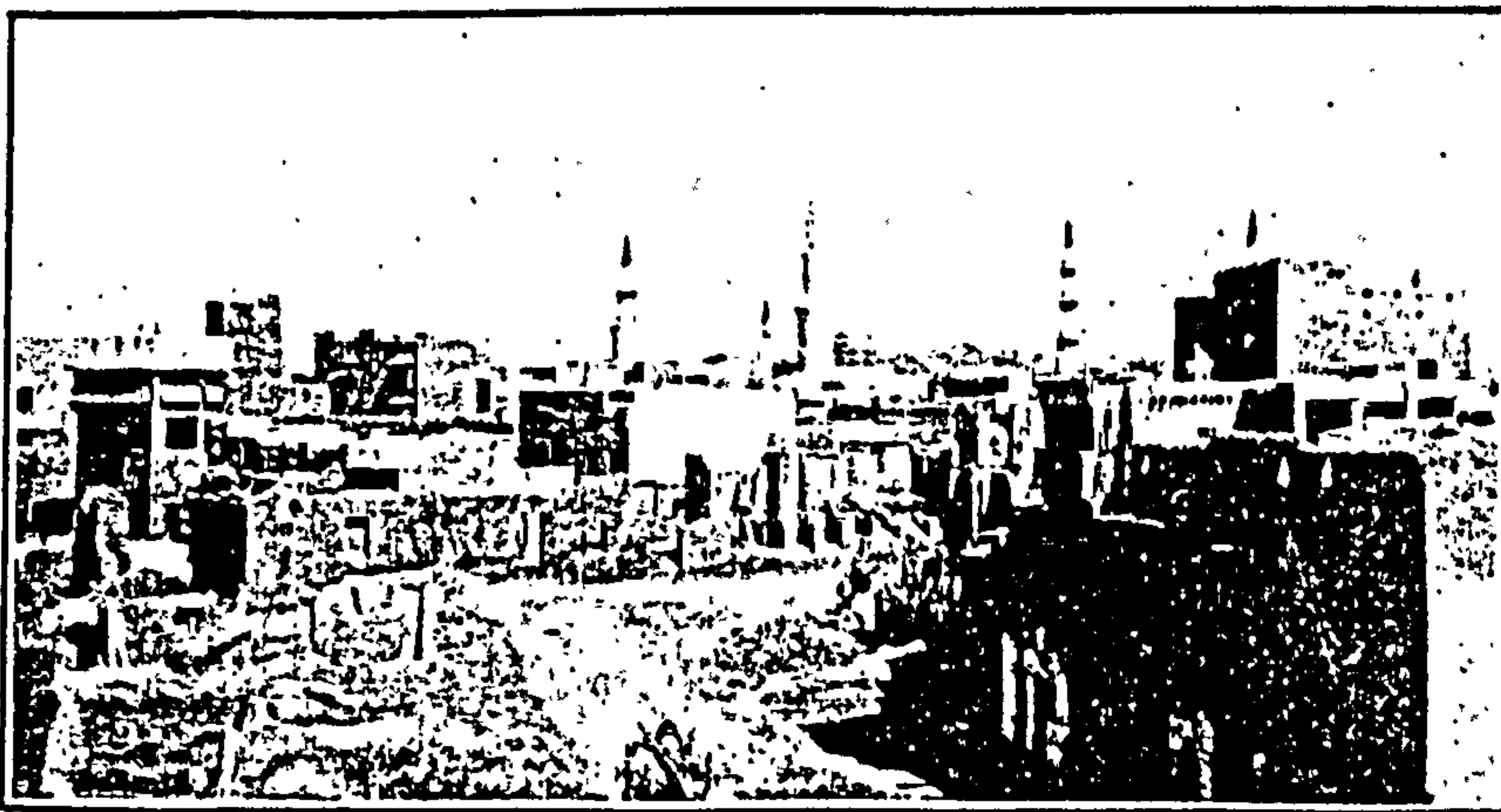


Plate 3.6. Al-Medina, al-ManāKha area, 1931.
Source: Ibid.



Plate 3.7. Al-Medina, a residential street, 1931.
Source: Ibid.



Plate 3.8. Al-Medina, al-^ṢAīnya street, 1954.
Source: Editors, "The Extension of the Prophet's Mosque at Medina", The Islamic Review, October, 1954, p.28.

706/1306. It was inscribed on a wakf (pious foundation) hostel for men.

The only new element that was introduced to the city at this time seems to be the automobile. The earliest car in use in the Hidjāz is reported to have been owned by the Sharif Ḥusyn b. ʿAlī in Mecca, after the departure of the Ottomans [12]. As far as Al-Medina was concerned, Philby mentioned that few cars were in use at the time of his first visit, in 1931. He says that the governor of Al-Medina had his fleet of vehicles and there were another three owned by wealthy citizens. In addition, in the pilgrimage season some cars were used to transport pilgrims from Mecca and Jeddah to Al-Medina and vice versa. Thus, the tracks leading to the nearby villages of Ḳubā' in the south, and Saydna Ḥamzah in the north, were improved and marked out.

As to the general character of the city Philby wrote:

"It is quite definitely a city with a soul. Its appeal is to the spirit rather than to the mind. And the genius loci, fostered through the long centuries by genuine and unbroken local veneration, pervades the whole atmosphere of Madina even as the steeped casket of its shrine dominates the physical landscape. Though more exposed to the political storms and tempests of the world, the Prophet's city must be more like its old self - in all essentials - than is the great heterogeneous corporation that now fills the valley of Mecca, ... " [13].

3.2 THE DEVELOPMENTS IN THE 1950s AND 1960s

The first major changes in the Saudi reign that influenced the morphology of the Prophet's city started in 1370/1950, following

the order of King ʿAbdulʿazīz Āl Saʿūd to the enlargement of the Haram and the street around it. The inauguration of the new building took place in 1375/1955 while the other projects were completed at a later time [14].

In this enlargement, the northern section of the building including the northern minarets, the eastern wall and the minaret next to Bāb al-Rahma, were torn down. The southern prayer hall as well as the southern minarets were maintained and incorporated into the new structure (Fig. 3.2 and Plate 3.9) which was built of reinforced concrete with a flat roof and took a more symmetrical shape. The new expansion was towards the north, east and west. The length north to south, was extended to 128 metres and the northern wall measured 91 metres in length, increasing the total area from 10,303 square metres to about 16,500 square metres. Another courtyard was introduced to the building, and two minarets, each 70 metres high and in neo-Mamluk style, were constructed in the northern corners. In addition, four new gates were added: Bāb ʿAbdulʿazīz in the middle of the eastern wall; facing it in the western wall Bāb Suʿūd; and Bāb ʿUmar and Bāb ʿUthmān in the western and eastern corners of the northern wall [15].

The transportation developments accompanying the project resulted, as did the Mosque itself, in large scale demolition of the old urban fabric of the city (Figs. 3.3, 3.4 and 3.6). The aim was to improve traffic by admitting the new guest, the motor car, to the area. Thus, new large, straight streets were opened, some of the azikka (alleys) widened, and the traditional aḥwāsh (plural of ḥwāsh, a large courtyard surrounded by thirty to forty houses with gate which was locked at night) altered. These, together with the

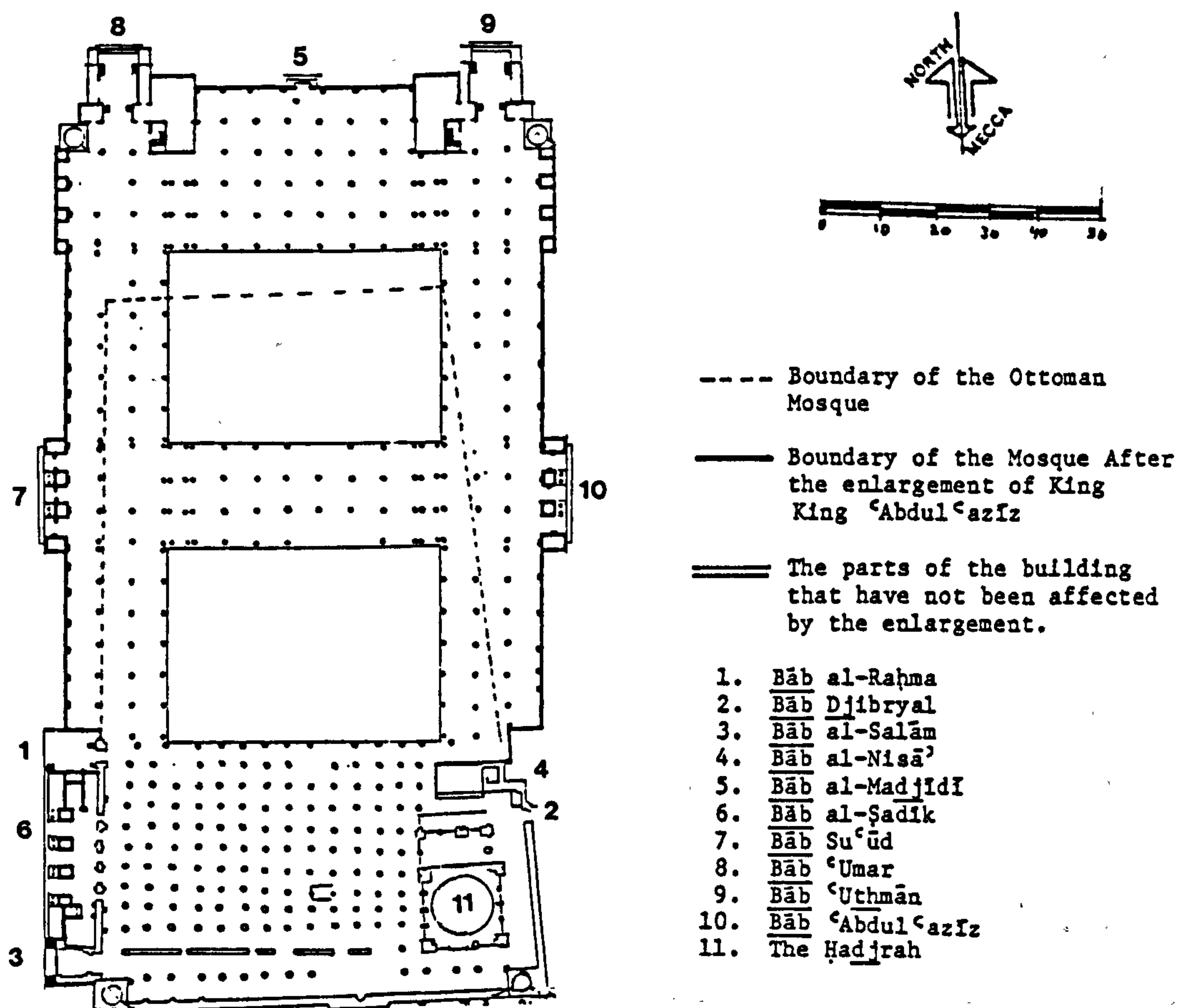


Fig. 3.2. Al-Medina. the Haram after the enlargement of King 'Abdul'aziz, 1370/1950-1375/1955.
Source: Hāfīz, 'Alī, Fuṣūl Min Tārīkh al-Madīna, Jeddah, 1984, p.100

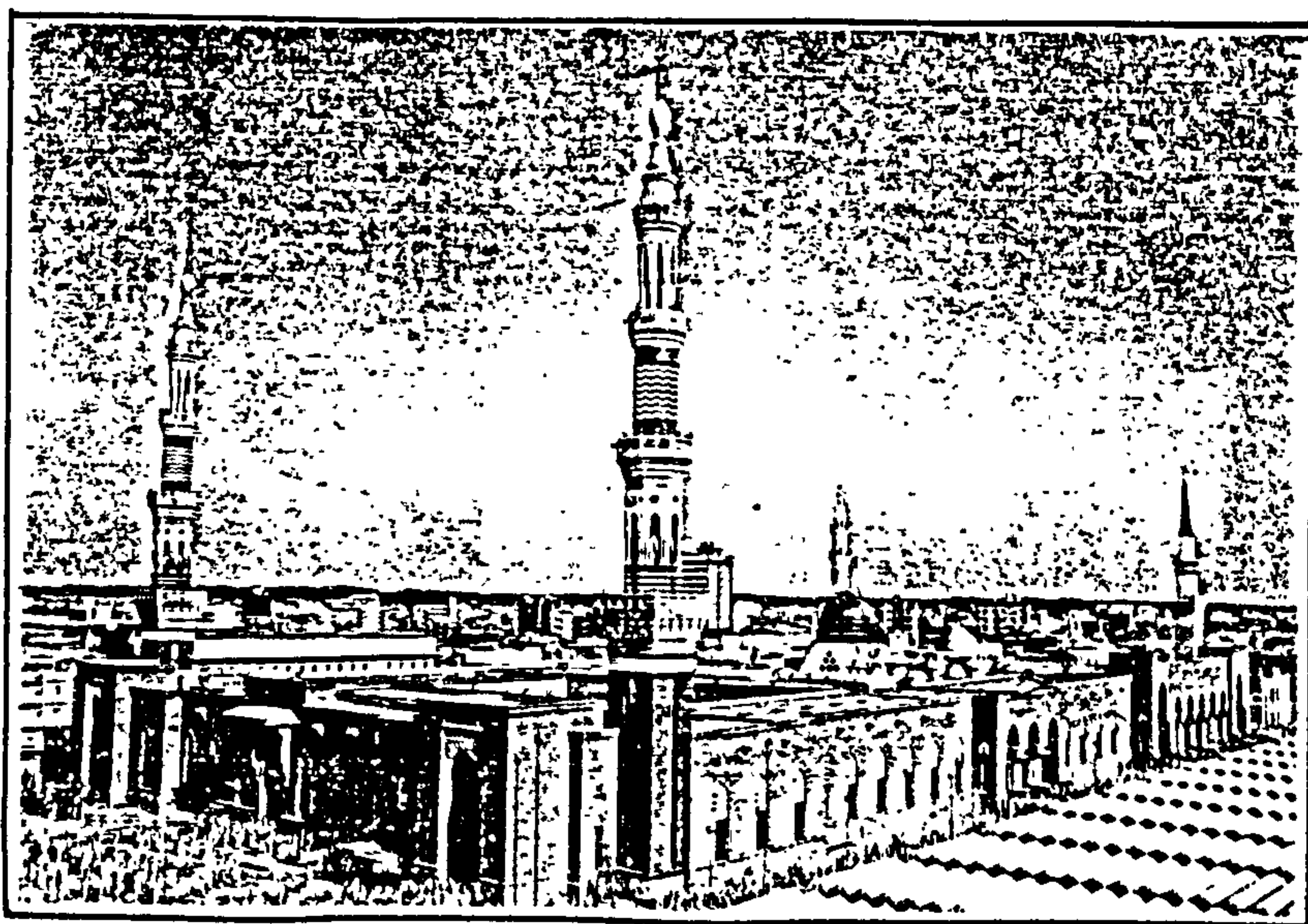


Plate 3.9. Al-Medina, the Haram after the enlargement of King 'Abdul'aziz

compensations that were given to the people whose properties were affected, led to an increase in land prices as compared with the period preceding the projects. As a result upward growth in the area started. Blocks of four to six storeys took the place of the two to four storey traditional buildings as it became lucrative to build flats for renting, or hotels [16].

The streets encircling the Haram were widened and paved with mosaic. A new square was made in the north of the Mosque and the old one opposite the Bāb al-Salām and Bāb al-Raḥma, in the west of the Mosque, was enlarged and paved with mosaic, too. This square was connected to the Darb al-Djanāfz Street with a completely new road, 12 metres wide. An asphalted street, King ʿAbdulʿaziz Street, was constructed after some clearances. This leads from the Mosque to Abī Dhar Street in the east. The streets of al-Maṭār (airport), and Abī Dhar were also widened and asphalted. In addition, the streets of al-ʿAnbarya, Ḳubāʾ, Saydna Ḥamzah (to the north) and Sulṭāna (to the north west) were asphalted [17]. With these developments large parts of the old city walls gradually disappeared under bulldozers. According to Philby in 1957 only some fragments of them could still be seen. [18]. The city expanded in every direction where land was available and the urban area increased from 250 hectares in 1945 to 800 hectares in 1964 (Figs. 3.5) [19].

The improvements in urban traffic routes were complemented by two major transport projects, namely the construction of an asphalted road linking the city with Jeddah, the main seaport and airport of the western part of the country; and the building of Al-Medina's airport that connected the city with the different parts of the Kingdom and indeed with the outside world [20]. The city

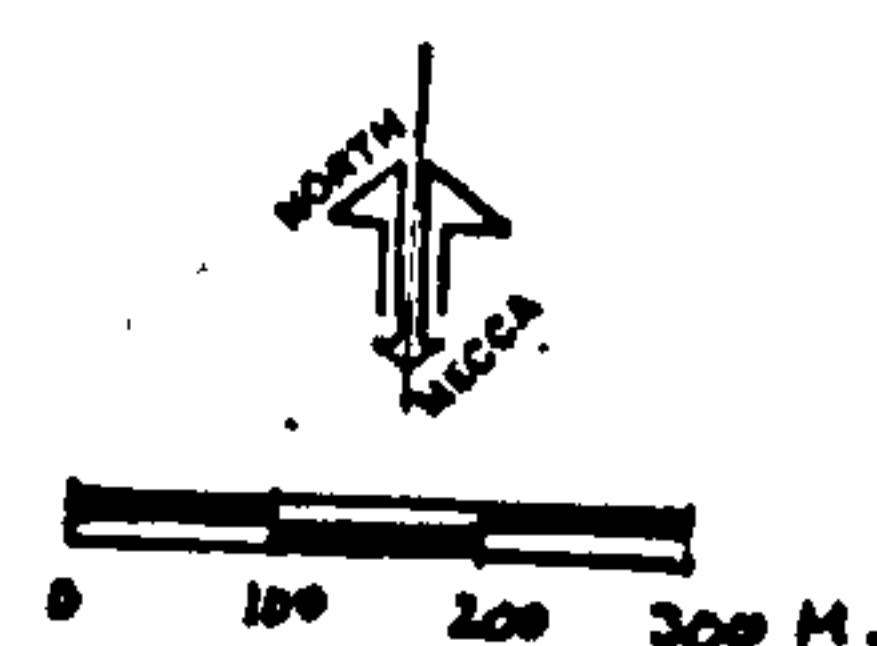
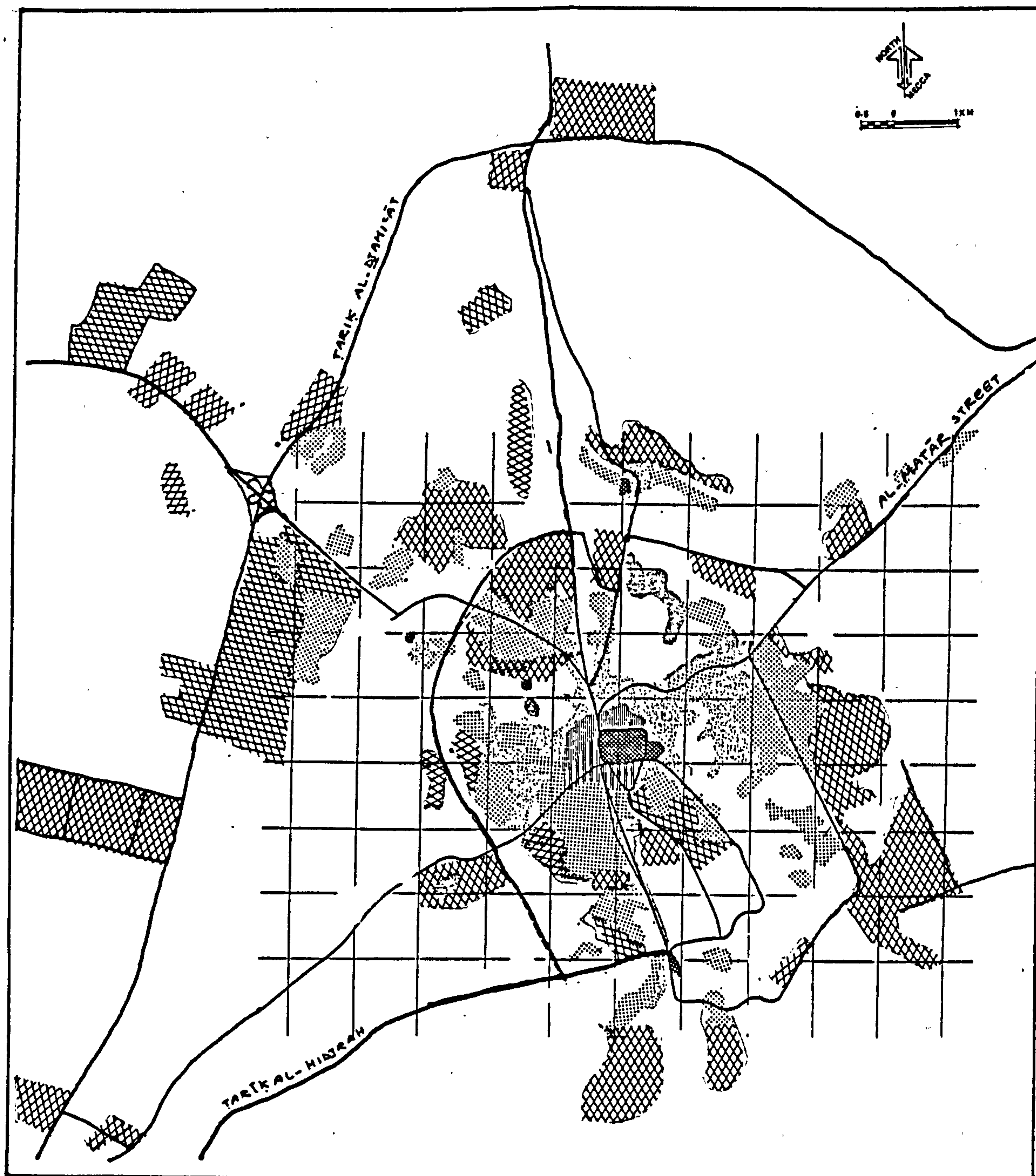


Fig. 3.3. Al-Medina, the Haram Area, 1370/1950
Source: GACDAR, Project No. 202 Ministry of Municipal and Rural Affairs, Riyadh, Report No. 13, 1982, p.18.



1. The Haram
2. al-Manākha Area
3. al-‘Aīnya Street
4. al-Bakya‘ Cemetery

Fig. 3.4. Al-Medina, the Haram Area, 1373/1953.
Source: Ibid., p.20.



■ 335/948-956/1549
 ■ 956/1549-1280/1865
 ■ 1280/1865-1364/1946
 ■ 1364/1946-1384/1964

■ 1384/1964-1391/1971
 ■ 1391/1971-1398/1978
 ■ 1398/1978-1405/1985

Fig. 3.5. Al-Medina, evolution of the built-up area.
 Sources: GACDAR, op. cit., Report No. 5-III, 1980, p.24;
 Municipality of Al-Medina, Dirasat al-Niṭāk al-ʿUmrānī,
 1987.

thus became much more easily accessible to visitors and to trade, both of which stimulated the local economy and created a further demand for new services and expansion of the city.

The process of changing the physical structure of the city was carried a stage further in 1381/1961 and this time by the municipality itself which launched a new plan, mainly aimed to facilitate transport and to accommodate the increasing numbers of motor vehicles that the new Al-Medina-Jeddah road had encouraged. The plan featured more wide streets, street lighting, planting and pavements for pedestrians (Fig. 3.6). Additional new streets were cut, for example al-Saḥa and al-Sunbulya streets, in order to connect Abī Dhar street with the Manākha and to provide an easy access to the Haram from the north. Other roads such as the al-^ḥAnbarya, Kubā', Bāb al-Madjīdī and al-^ḥAwālī were widened. Entrances to some of the old ahwāsh were widened too, while some other ahwāsh were opened up by new modern streets crossing through them. In addition, the old Ottoman fort, at the north of the Manākha, was torn down in order to give part of its site to the new Manākha boulevard that was planned to allow the flow of the north-south through traffic. These developments together with compensation for the properties lost cost SR.27 million [21].

These street constructions were followed by other public and private building developments. The former include building governmental offices, schools, hospitals and other local community facilities and services for pilgrims. Private development was mostly in the construction of hotels, guest houses and apartment buildings, and in catering, mainly for meeting the increasing demand for accommodation for pilgrims. The number of overseas pilgrims

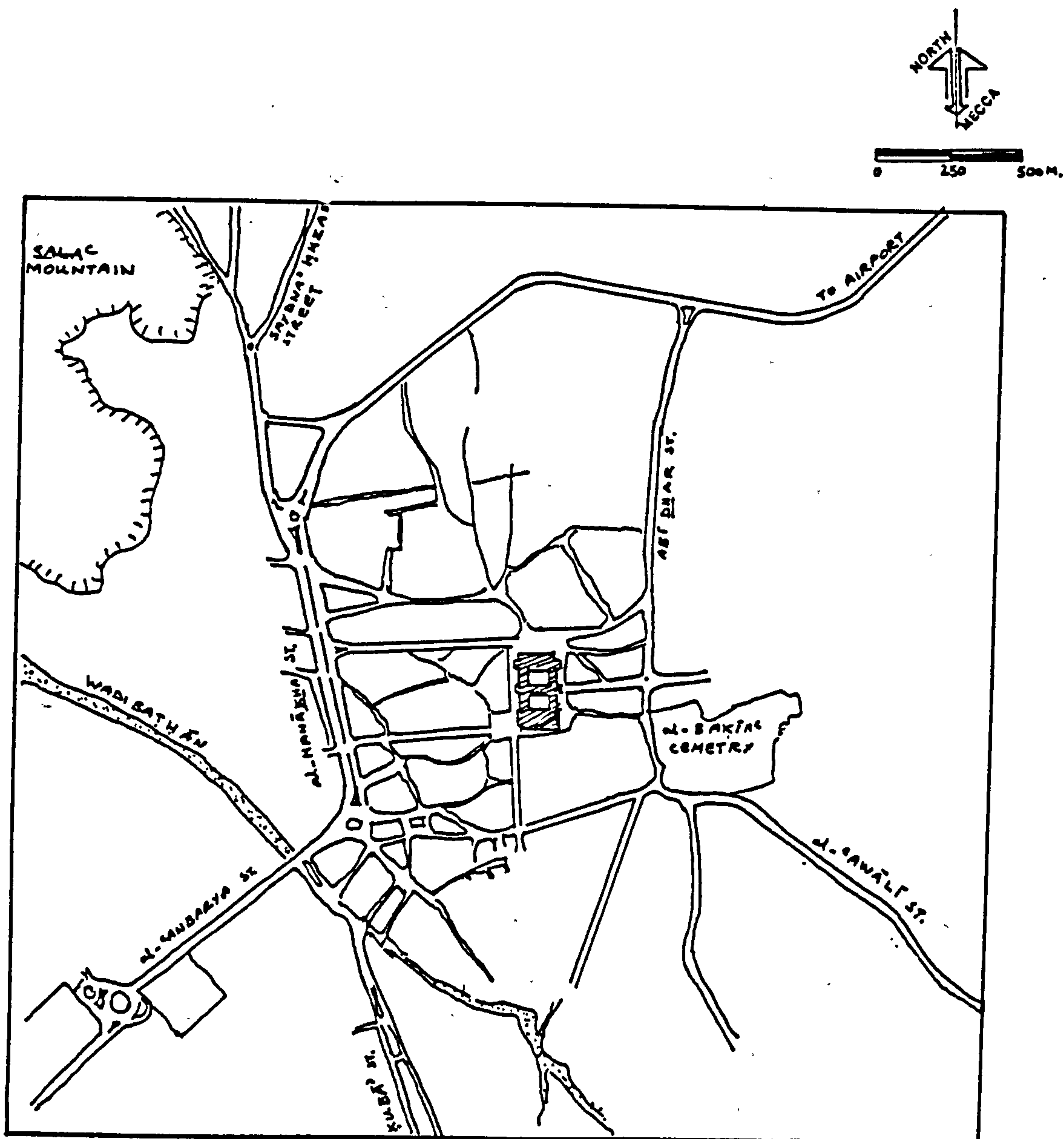


Fig. 3.6. Al-Medina Street Plan, 1370s/1950s.
Source: Hāfiz, op. cit., appendix.

increased more than four-fold in a decade: it rose from 23,863 in 1360/1942 to 100,578 in 1370/ 1951. By the end of the next decade (1380/1961) it had jumped to 285,948 and to 431,270 in the pilgrimage of 1390/1971 (Table 3.3).

These developments obviously created new jobs and enhanced the standard of living in the city. Together with the city's religious sanctity, improvements in community services and cheap travel, the developments attracted more immigrants from the surrounding rural areas as well as from outside the country. As a result the city's population increased from 40,000 in 1959 to 50,000 in 1962; a growth rate of 7.7 per cent a year. In the next seven years it more than doubled with an average annual growth rate of 11.9 per cent. By 1969 the population of the city was estimated at 110,000 (Table 3.1).

At this stage the city's growth may be characterized as a polynuclear development. It took place in four satellite suburbs outside the city walls, which developed along the newly constructed roads leading to the old settlement of Kubā' to the south, the airport to the north east, Sayd al-Shuhadā' area to the north, and along al-Sayh street in the west. The increasing population, progressive demolition of the old city, and relatively cheap land in these suburbs attracted further developments until they eventually were integrated as quarters of the city (Fig. 3.5). However, many vacant plots in these areas as in other parts of the city, are still to be seen today. To a large extent they have been left undeveloped in anticipation of a further increase in land prices and land speculation.

The height of buildings as well as the quality of

construction depended on the location of the site in relation to the Haram. The closer the area to the Haram, the more expensive the land and consequently the higher the buildings and the better the quality of construction. Heights ranged from a single storey to six storeys. Buildings in the vicinity of the Haram and along the main streets were mainly constructed of reinforced concrete with large balconies replacing the old rwāshīn, and outer courtyards in villas replacing the inner courtyards of the traditional houses. Buildings further away from the Haram and off the main roads however, were still built of stone and sun-dried bricks during the 1950s and 1960s. In some cases traditional and new materials were combined, with stone used in the ground floor and concrete blocks above. The former is more insulating, whilst the latter gave a thinner wall construction thus creating larger rooms [22].

3.3 THE DEVELOPMENTS IN THE 1970s and 1980s

During the 1970s and 1980s the city has undergone greater physical changes than at any time before. Development processes were stimulated further by the 1970s economic boom and its associated social and economic pressures. The economic growth prompted a manifold increase in public expenditure on the physical development projects which can be classified into two categories. Firstly, there are the projects financed directly by the state. These include development of the infrastructure of the city, for example roads, water supply and electricity networks; and community services such as schools, hospitals, public housing and governmental

offices. Secondly, there are the projects that are supported by the Real Estate Development Fund (REDF), a new government agency established in 1394/1974. The Fund, basically offers two types of long term (25 years) interest free loans to Saudi nationals for construction projects. Private loans which are granted to land owners for building private houses. These loans should not exceed 70 per cent of the cost of the building, with a maximum limit of SR.300,000. Additionally, investment loans are given for the construction of commercial projects such as hotels, offices and large scale housing developments. These loans are restricted to a maximum of 50 per cent of the total cost of the project with an upper limit of SR.10 million. The conditions that the applicant should own the land and should contribute towards the cost of the building from his/her own resources limits the number of the people eligible for these loans. However, it is reported that 14,000 applications were approved by the REDF in Al-Medina between 1975 and 1984 [13].

These developments required an extensive skilled and non-skilled labour force that could not be met by the city's previous population growth rates. However, the sanctity of the city and the sharp increase in wages which resulted from the rising demand for employees, attracted more migrants from rural areas within the Al-Medina region and from outside the country. The population of the city increased to about one and a half times its former size in three years, with the highest annual growth rate (13.1 per cent) since the end of the Ottoman era (Table 3.1). In 1971 the architectural and planning firm Robert Matthew, Johnson Marshall and Partners, depending on a sample survey, estimated the

population of the city at 137,000, and according to the 1974 census, it rose to 198,055 in 1974. In 1978 a sample survey carried out by the GACDAR (Group of Arab Consultants for Development and Reconstruction), showed that the population had increased to 311,284, at a rate of 11.9 per cent a year [24]. This survey indicated in addition that immigrants constituted a significant proportion of the population. It showed that about 44.6 per cent of the total number of heads of households were born in Al-Medina, while the rest (55.4 per cent) were born outside the city. Saudis constituted about 64.2 per cent of the immigrants while the remaining 35.8 per cent came from outside the country [25]. Furthermore, the construction sector in the employment structure of the population jumped from 4.9 per cent in 1971 to 11.4 per cent in 1978 [26]. The overall growth rate of the city population was predicted by the Municipality of Al-Medina as 4.5 per cent as a low forecast and 6.5 per cent as a high forecast [27]. This would give a projected population of 480,000 for the low estimate and 580,000 for the high estimate in 1988.

The rapid population growth of the city was accompanied by a corresponding increase in the number of visiting pilgrims. For example, the total number of pilgrims from both inside and outside Saudi Arabia of whom 80 per cent visited Al-Medina in 1978 according to GACDAR [28], almost doubled in nine years, jumping from 1,079,760 pilgrims in 1390/1971 to 2,079,689 pilgrims in 1399/1979. The peak, however, was in 1403/1983 when the number of pilgrims reached 2,501,706. The number then declined as a result of the government's restriction of the numbers of pilgrims from inside the country and by 1407/1987 it dropped to 1,619,324 pilgrims (Table 3.3).

Table 3.1 Population growth in Al-Medina

Year	Source	Population	Average Annual rate of growth between the years (%)
1814	Burckhardt	16-18,000	-
1853	Burton	16-20,000	-
1877	Keane	20,000	-
1908	Wavell	30,000	1.3
1910	al-Batanuni	60,000	41.4
1910-14	Philby	80,000	-
1925	Rutter	6,000	-
1931	Philby	15,000	-
early 1940s	Western Arabia and the Red Sea	20,000	-
1959	Lipsky	40,000	-
1962	National Census	50,000	7.7
1969	Cholera Vaccination	110,000	11.9
1971	Robert Matthew	137,000	11.6
1974	National Census	198,055	13.1
1978	GACDAR	311,284	11.9

Sources: Materials cited in the previous chapter of this thesis; Makki, M.S., Medina Saudi Arabia, England, 1982, pp.90-5; GACDAR, op. cit., Report No. 5, V.I, October 1980, p.21.

Table 3.2 The growth of the Urban Area of Al-Medina.

Year	Cumulative Area in hectares	Average Annual rate of growth between the years (%)
1946	250	
1964	800	12.3
1971	1,300	7.2
1978	2,360	8.9
1985	4,691	10.3

Sources: Areas are obtained from, GACDAR, op. cit., Report No. 5-III, 1980, p.23; Municipality of Al-Medina, Drāsāt al-Niṭāk al-ʿUmrānī, Al-Medina, 1987, Table 1.

Table 3.3 Growth of Number of Pilgrims.

Year	No. of Overseas Pilgrims	No. of Pilgrims from inside Saudi Arabia	Total Number of Pilgrims
1350/1932	29,065	-	-
1360/1942	23,863	-	-
1370/1951	100,578	-	-
1380/1961	285,948	-	-
1390/1971	431,270	648,490	1,079,760
1399/1979	862,520	1,217,169	2,079,689
1400/1980	812,892	1,136,742	1,949,634
1401/1981	876,368	1,063,812	1,943,180
1402/1982	853,555	1,158,000	2,011,555
1403/1983	1,005,060	1,497,795	2,501,706
1404/1984	919,671	744,807	1,664,478
1405/1985	851,761	738,015	1,589,776
1406/1986	856,718	743,757	1,600,475
1407/1987	960,386	658,938	1,619,324

- Sources: 1. Directorate General of Passports, Pilgrims Statistics For 1406 A.H. 1986 A.C., Ministry of Interiors, Riyadh, 1986, p.1;
2. Ministry of Pilgrimage and Endowments, Ḳabasāt Mīn Mawsim Ḥadj 1407 A.H., Ministry of Pilgrimage and Endowments, Riyadh, 1987, p.406.
3. Unpublished data obtained from the Pilgrimage Research Centre, Mecca.

Note: Statistics for pilgrims from inside Saudi Arabia were first made available in 1971.

As for the urban area, it has increased rapidly, but at a slower rate than the growth of the population which suggests an increase in the overall population density. The area increased from 1,300 hectares in 1971 to 2,360 hectares in 1978, at a rate of about 8.9 per cent a year. In the next seven years it almost doubled to 4,691 hectares with an annual growth rate of 10.3 per cent (Table 3.2).

The Haram Area in particular, was the most affected by these recent developments. Its historical character and the traditional urban fabric that had developed and been refined over centuries became obsolete before the bulldozers. In 1970 a large part of the old quarter to the west of the Mosque was demolished and temporary canopies were built to provide a shaded prayer area for the increasing numbers of pilgrims and residents of the city (Fig. 3.7). In 1975 the rest of the quarter up to the al-Manākhā Street was cleared for extending the canopied area (Fig. 3.8) [29]. These extensions added to the 16,500 square metres permanent building, an area of 45,000 square metres [30].

In 1975 a fire broke out in al-Shūna quarter, to the south west of the Haram, resulting in the loss of a further portion of the old city (Fig. 3.9). Through this quarter ran the sūk (market) of al-Ḳmāsha, the sellers of textiles. The narrow winding street was lined on both sides with about 400 small shops (each 2-2.5 metres in width) specializing in this single commodity, textiles [31]. The site of this quarter is now occupied by a large car park (Plate 3.10).

In addition a new road, the First Ring Road, encircling the Haram Area was constructed after the acquisition and clearance

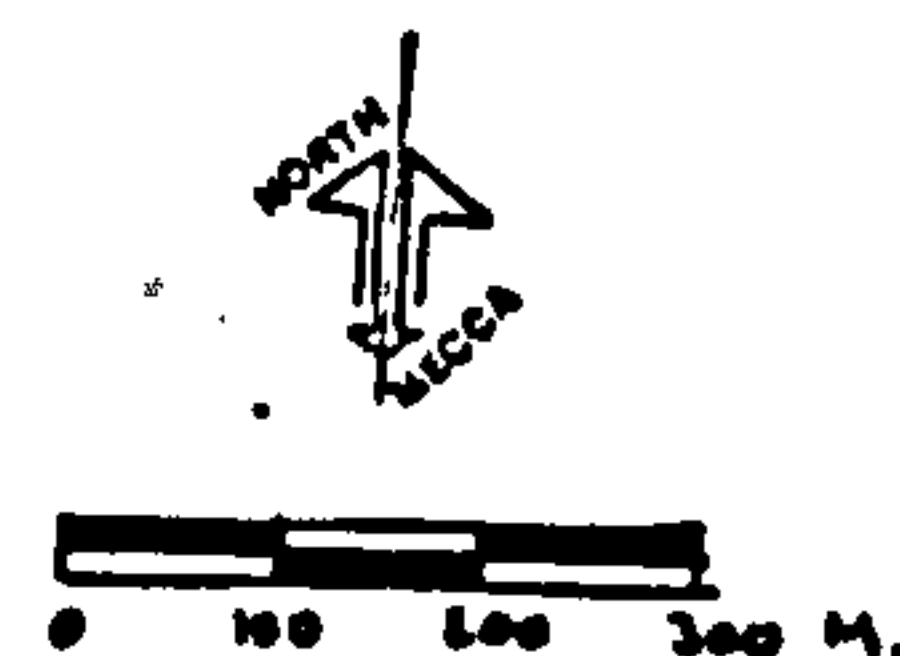
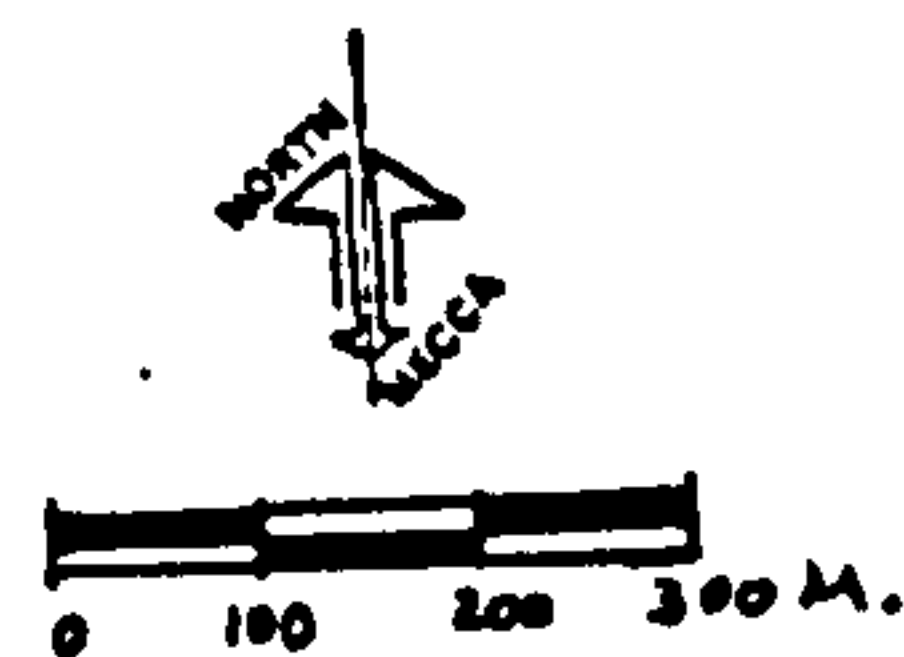


Fig. 3.7. Al-Medina, the Haram Area, 1390/1970.
Source: GACDAR, op. cit., Report No. 13, 1982, p.21.



1. The Haram
2. al-Manākha Street
3. al-'Anbarya Street
4. al-Bakya^c Cemetery
5. The First Ring Road

Fig.3.8. Al-Medina, the Haram Area, 1395/1975
Source: Ibid., p.22.



1. The Haram
2. al-Manākha Street
3. al-ʿAnbarya Street
4. al-Bakya Cemetery
5. The First Ring Road

Fig.3.9. Al-Medina, the Haram Area, 1397/1977
Source: GACDAR, op. cit., Report No. 13, 1982, p.27.

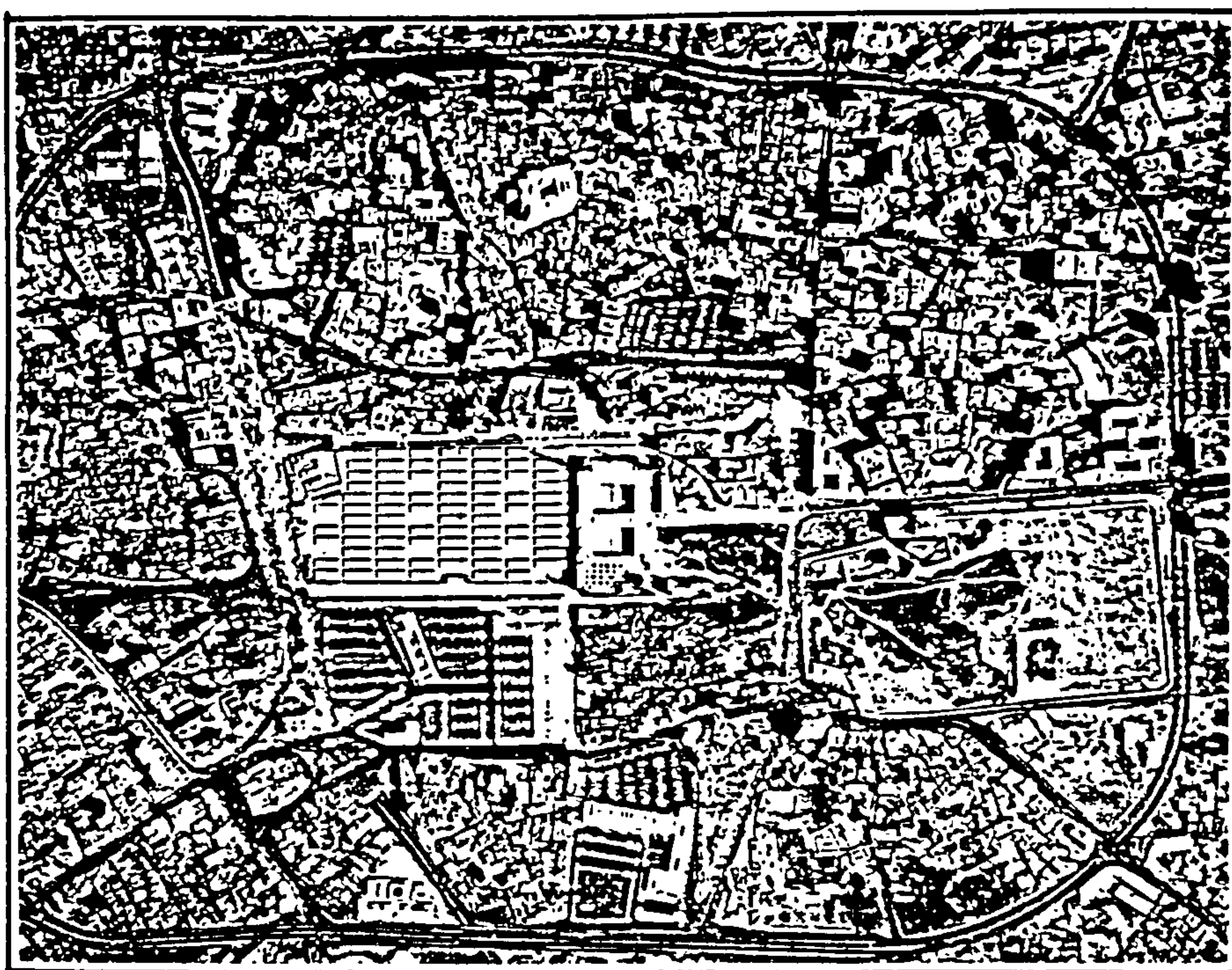
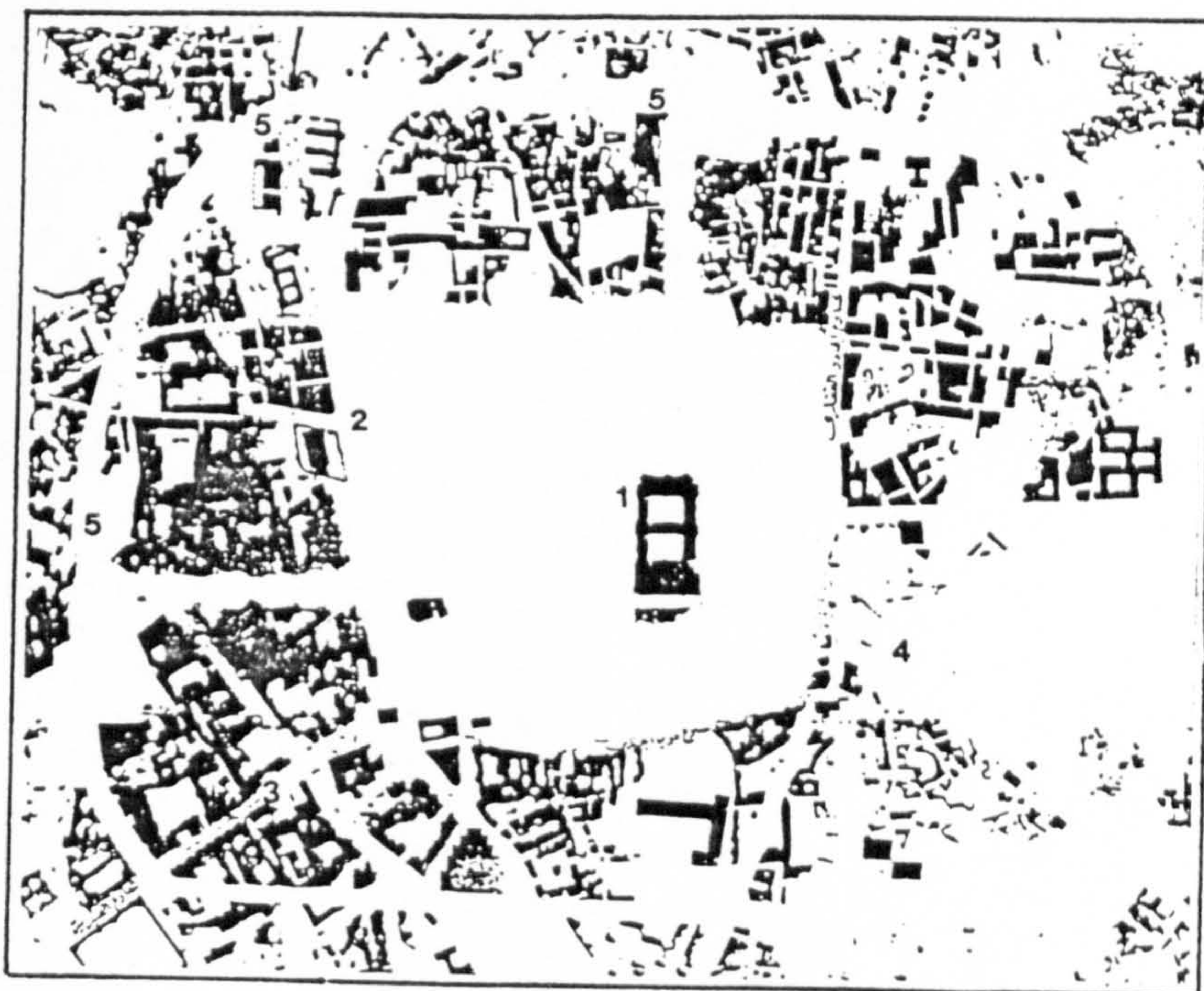


Plate 3.10. Al-Medina, the Haram Area, mid-off 1980s.
Source: Al-Djuhari, ʿUsāma, "al-Medina al-Munwara, Taḥdīd al-Niṭāk al-ʿUmrānī, Tawsiʿ at Al-Ḥaram al-Nabui al-Sharif", Albenna, No. 37, v. 7, October-November, 1987, p.26.

of many traditional buildings, mostly houses. This resulted in a further disintegration of the old urban fabric of the city, especially in the area to the west of al-Manākha Street, that consisted principally of old aḥwāsh. To improve the traffic flow of this road, originally built to solve the transport problems in the area, an overhead bridge and tunnel were built in the early 1980s. The bridge was constructed along the southern part of the Ring Road, stretching between the junctions of the al-ʿAnbarya and Kurbān roads, while a tunnel was built under al-Manākha Street to ease the north-south through traffic in the city [32]. These developments have further exposed the Haram Area to traffic, which has had an obvious impact on its peaceful and historical character. The Ring Road and the bridge in particular, also resulted in the present physical separation of the area from the rest of the city, which had, through centuries, evolved as a natural extension of the Mosque (Plate 3.10).

Further areas of the old city were cleared in the last four years to make way for the largest ever extension of the Haram (Fig. 3.10 and Plate 3.11). These included the quarter of al-Aḥwāt, to the south-east of the Haram. This was the oldest part of the town with its historic covered alleys some of which are said to have been in use since the Prophet's time (Fig. 2.13) [33]. The quarter also contained some historic buildings one of which was a wakf (pious foundation) hostel. As mentioned earlier, it said to have dated from the beginning of the 8th/14th century (plates 2.12, 1.13, 3.12 and 3.13). The demolition also extended to the areas in the north and east of the Mosque, which contained the last remains of the traditional aswāk (plural of sūk), and which for centuries



1. The Haram
2. al-Manākha Street
3. al-'Anbarya Street
4. al-Bakya Cemetery
5. The First Ring Road

Fig. 3.10. Al-Medina, the old parts of the city that were cleared by 1987.

Source: Based on maps obtained from the Municipality of Al-Medina.

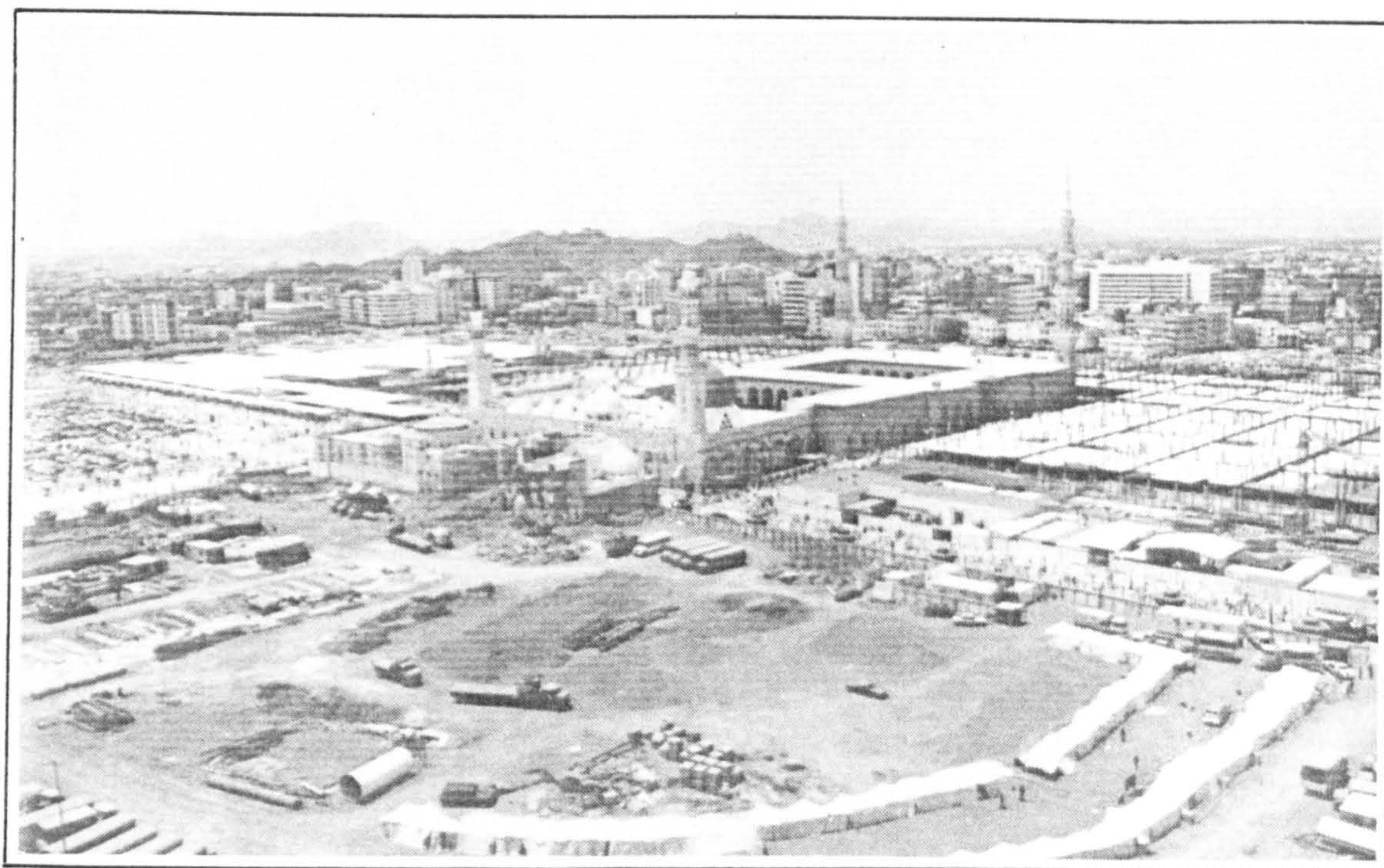


Plate 3.11. Al-Medina, the Haram Area, looking North-west, 1987.

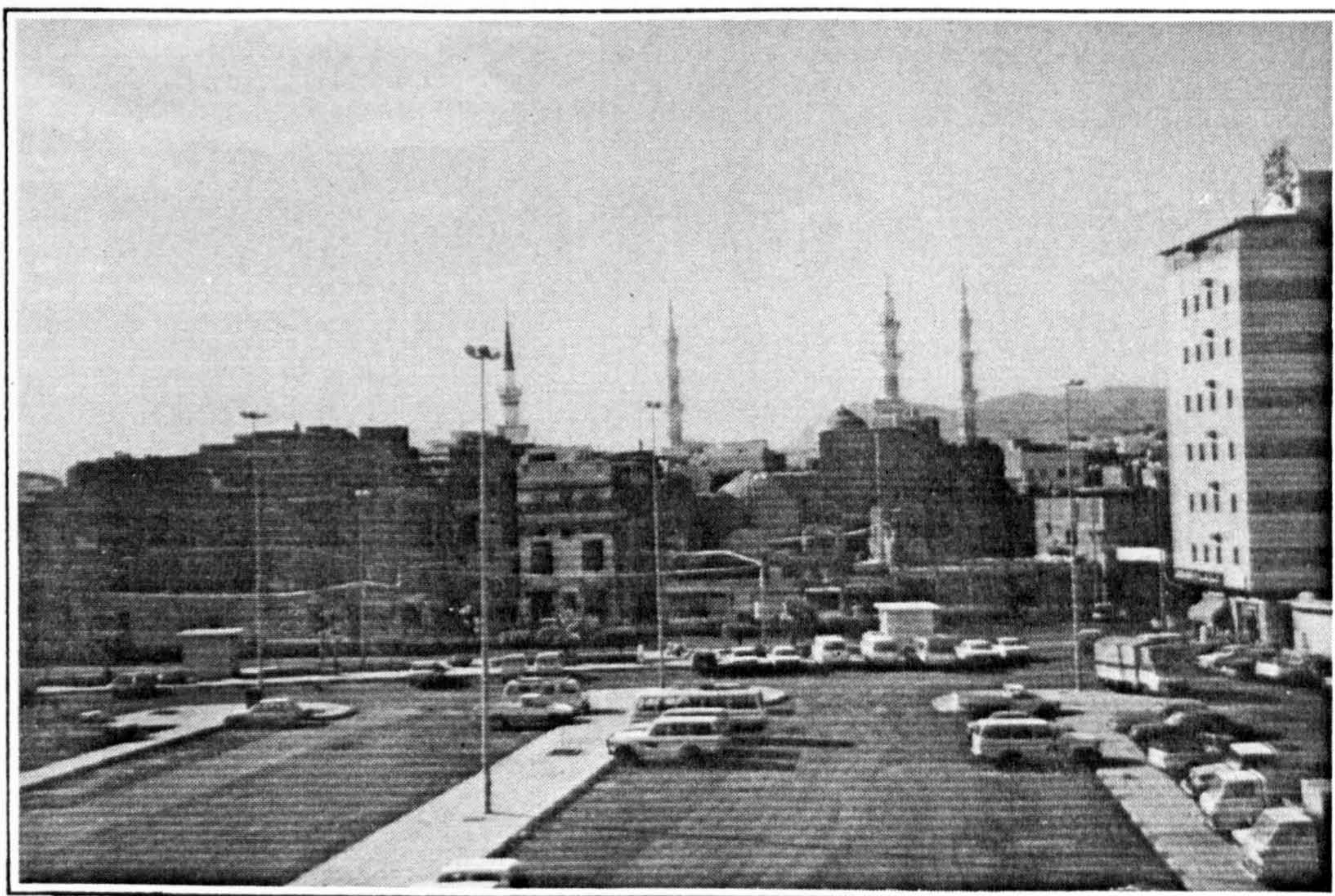


Plate 3.12. Quarter of al-Aghwāt.
 (this photograph was taken just before the demolition of
 the area in 1405/1985.

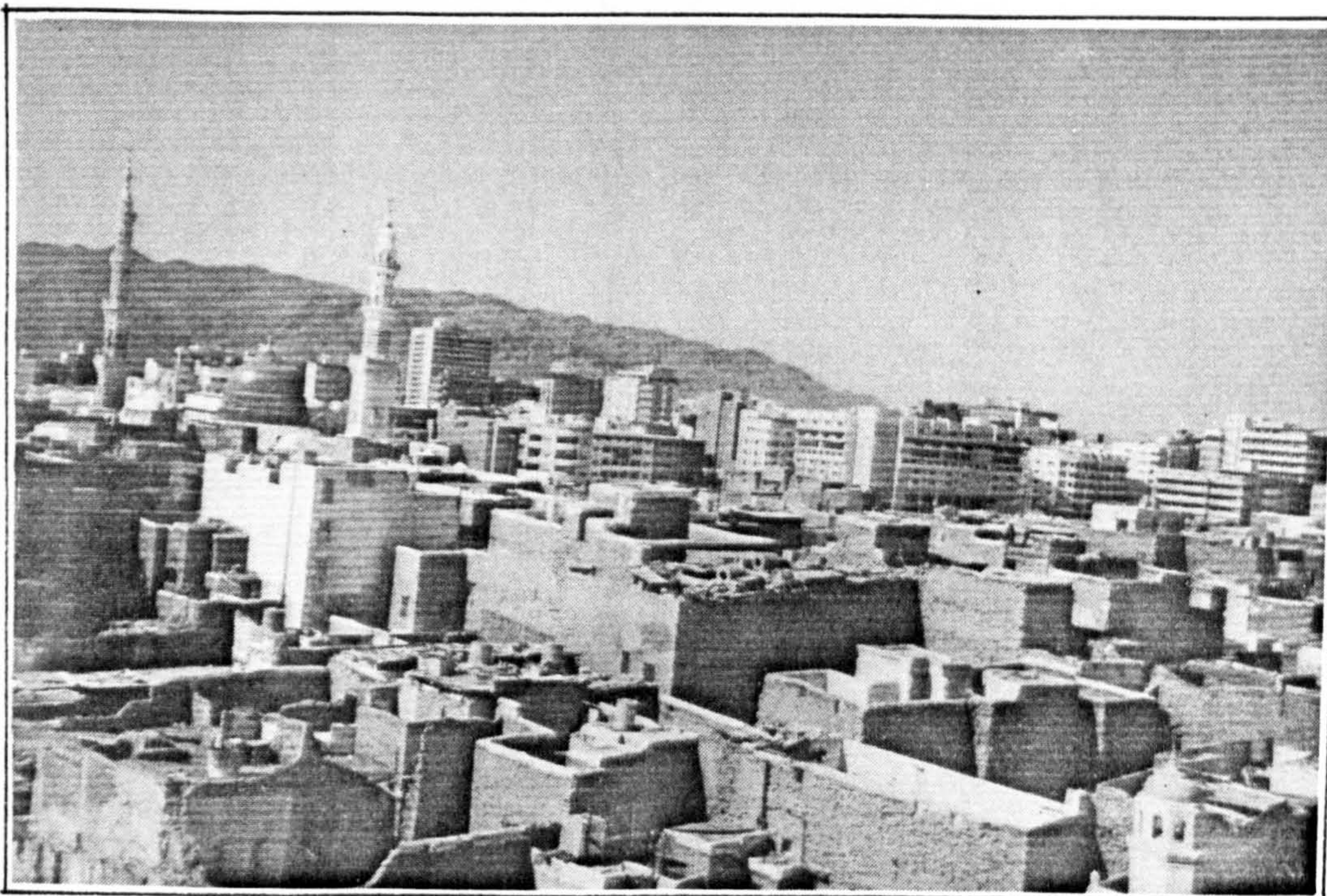


Plate 3.13. Quarter of al-Aghwāt.
 (this photograph was taken just before the demolition of
 the area in 1405/1985.

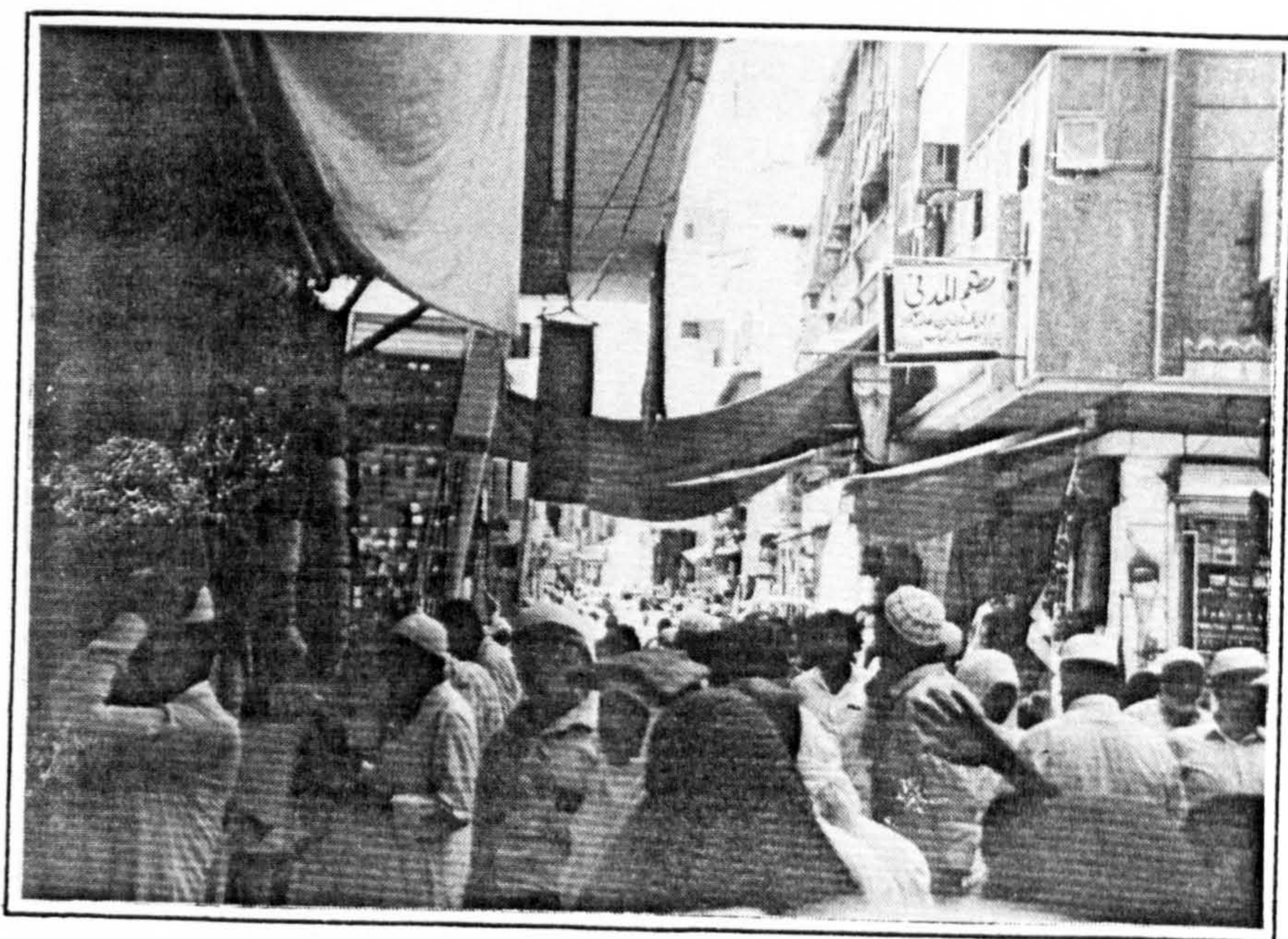


Plate 3.14. Traditional sūq to the north of the Ḥaram.
 (this photograph was taken just before the demolition of
 the area in 1407/1987.

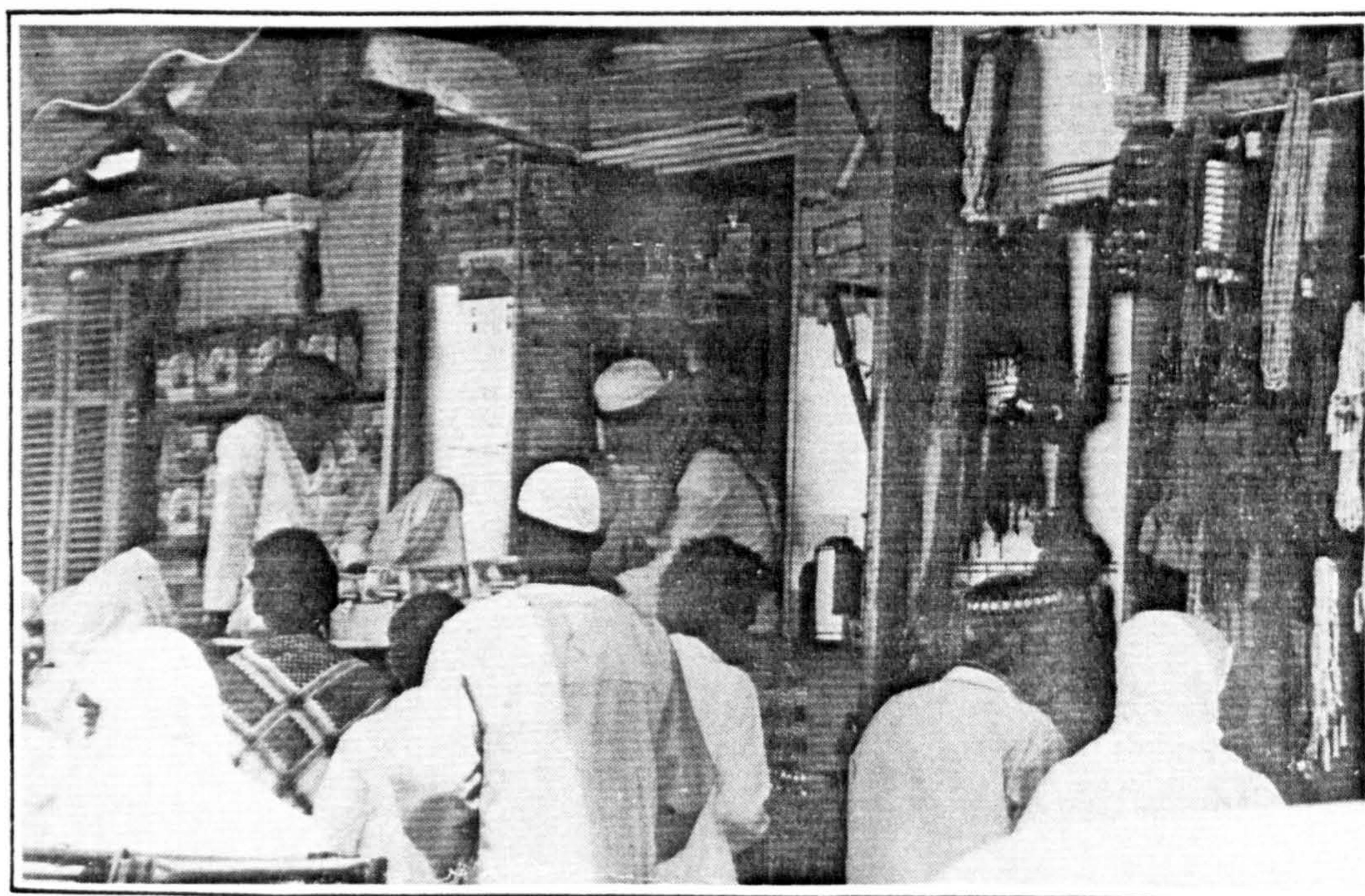


Plate 3.15. Traditional money exchanger and subah (beads) shop in
 al-Sāḥa Street, to the north of the Ḥaram.
 (this photograph was taken just before the demolition of
 the area in 1407/1987.

characterized the city (Plates 3.14 and 15).

With the clearance of the Bāb al-Mad̲jīdī quarter to the north of the Haram in particular, the city lost in addition, the last fragments of its finest architectural heritage. This area was the last remains of the northern suburb that developed towards the end of the Ottoman period. Buildings along the principal street of this quarter were three to four storeys, built of stone, with shops at ground floor level and dwellings in the upper ones. The facades of the upper floors were covered with a series of high quality wooden screens, rwāshīn (Plates 3.16 and Fig. 3.11).

The enlargement of the Haram which is now under construction, was ordered by the Custodian of the Two Holy Mosques, King Fahad b. ‘Abdul‘aziz, in Rad̲jab 1403/May 1983 [34], and the actual construction work was started in Muḥaram 29th, 1406/October 3rd, 1986 [35]. It will increase the original Mosque to about six times its present capacity, from about 28,000 to 165,000 worshippers. In addition, the possibility of the use of the roof of the new structure as a prayer area has been considered in the design and which would increase the total capacity of the Mosque to about 255,000 worshippers [36].

The new reinforced concrete extension will encompass two-thirds of the southern part of the old building and will be sympathetic with the existing facades (Fig. 3.12, and Plate 3.17). It will add 79,000 square metres to the basement, 82,000 square metres to the ground floor and 67,000 square metres to the roof. The basement will be allocated to such services as storage and the installation of electricity and air-conditioning. The ground floor and the roof will be used for prayer. Six further minarets, each

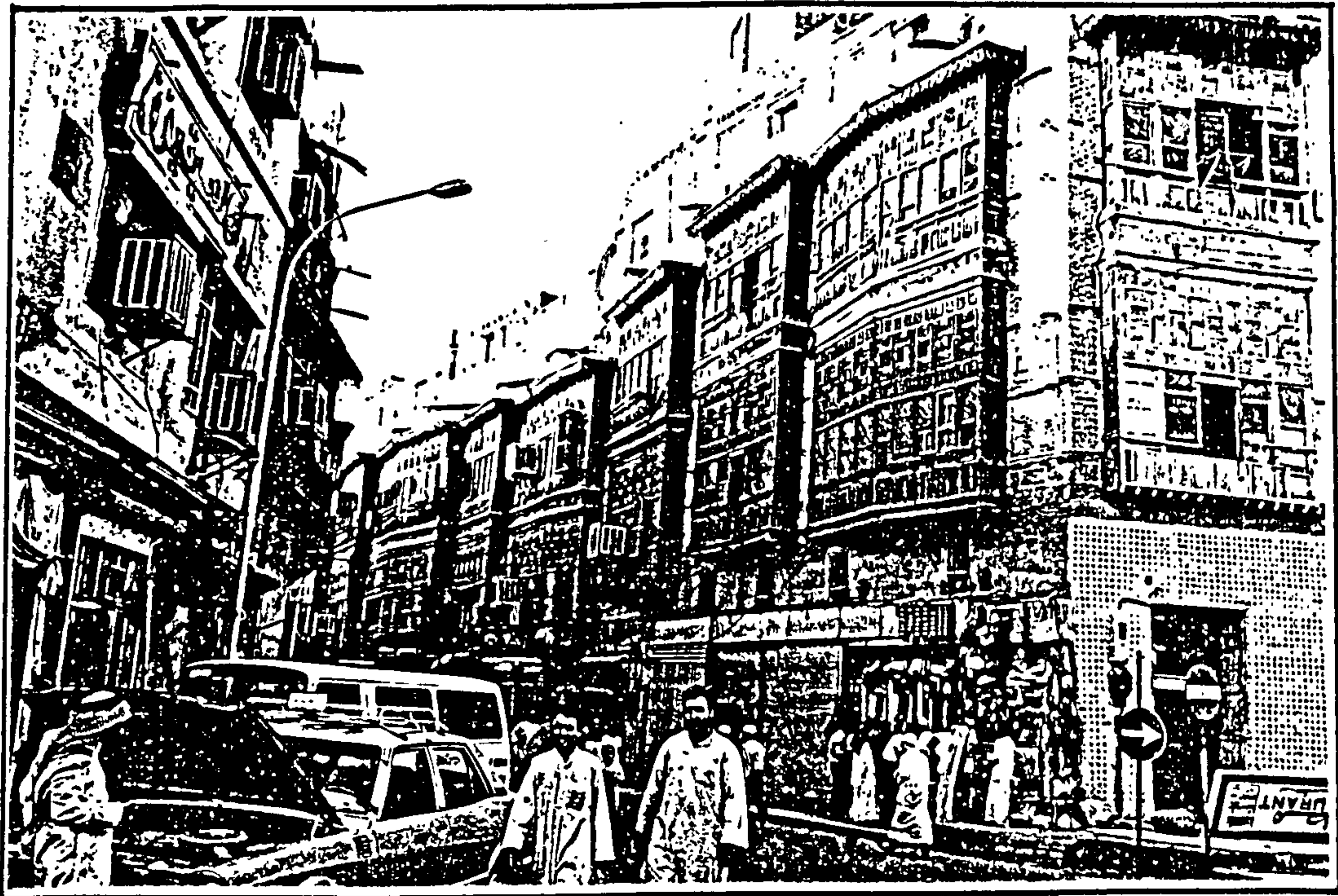


Plate 3.16. The principal street of the quarter of Bāb al-Mad̲j̲idī, demolished in 1407/1987.

Source: Ṭaha, Ḥātīm, Ṭiba Wa Fanaha al-Rafīʿ, Al-Medīna, 1984, p.48.

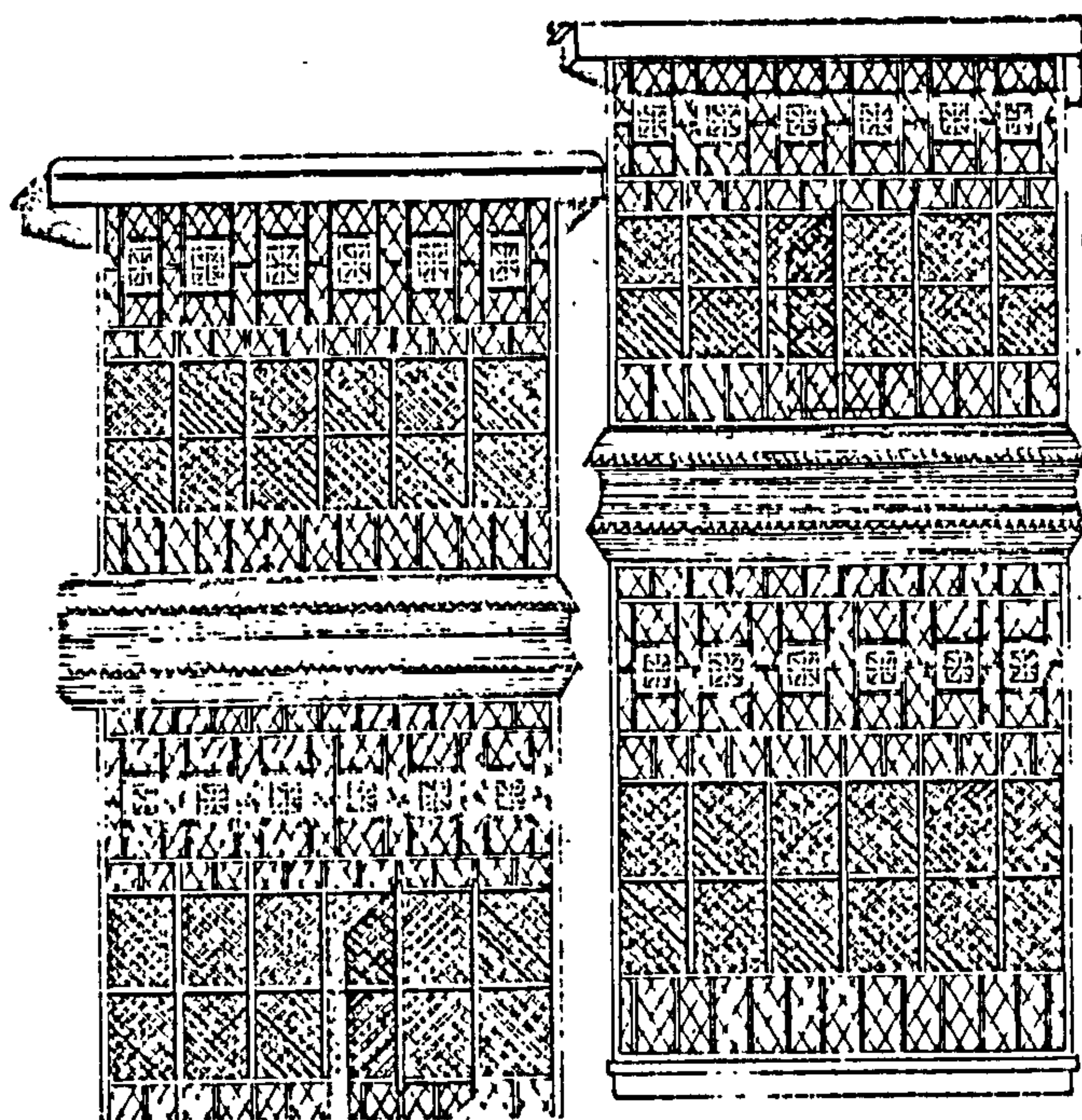


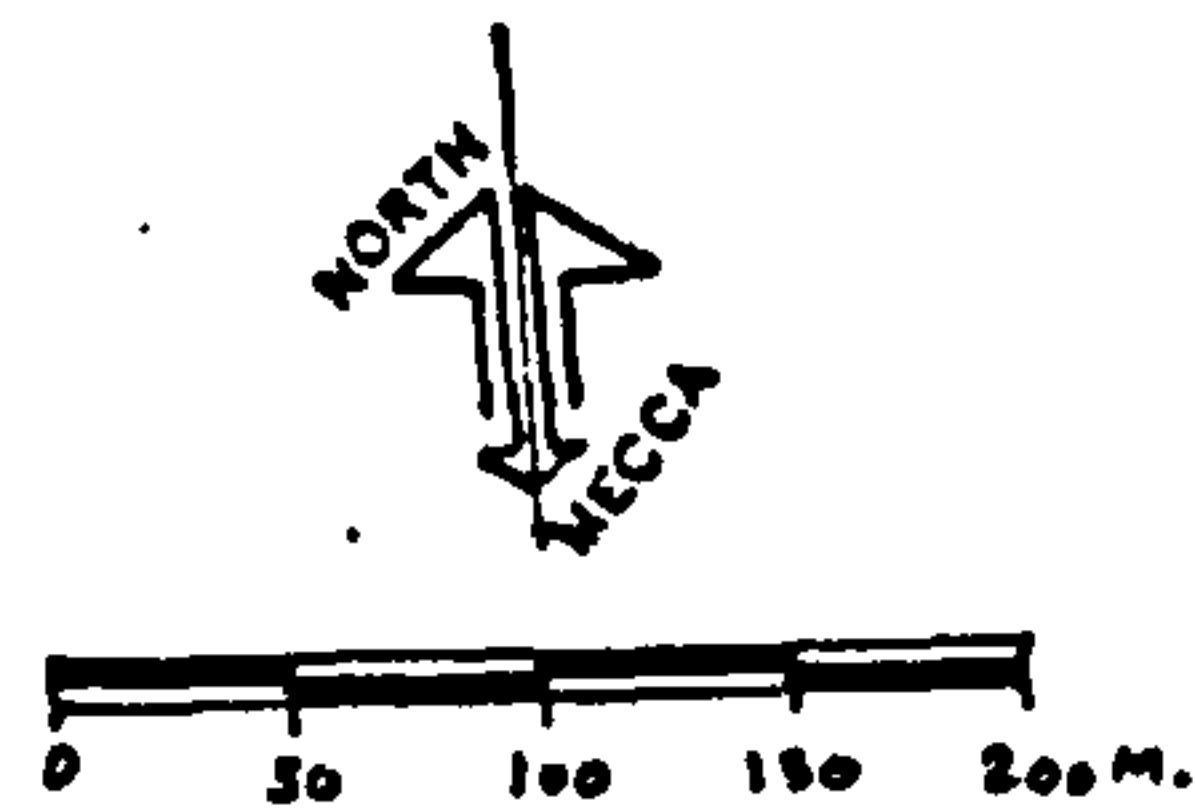
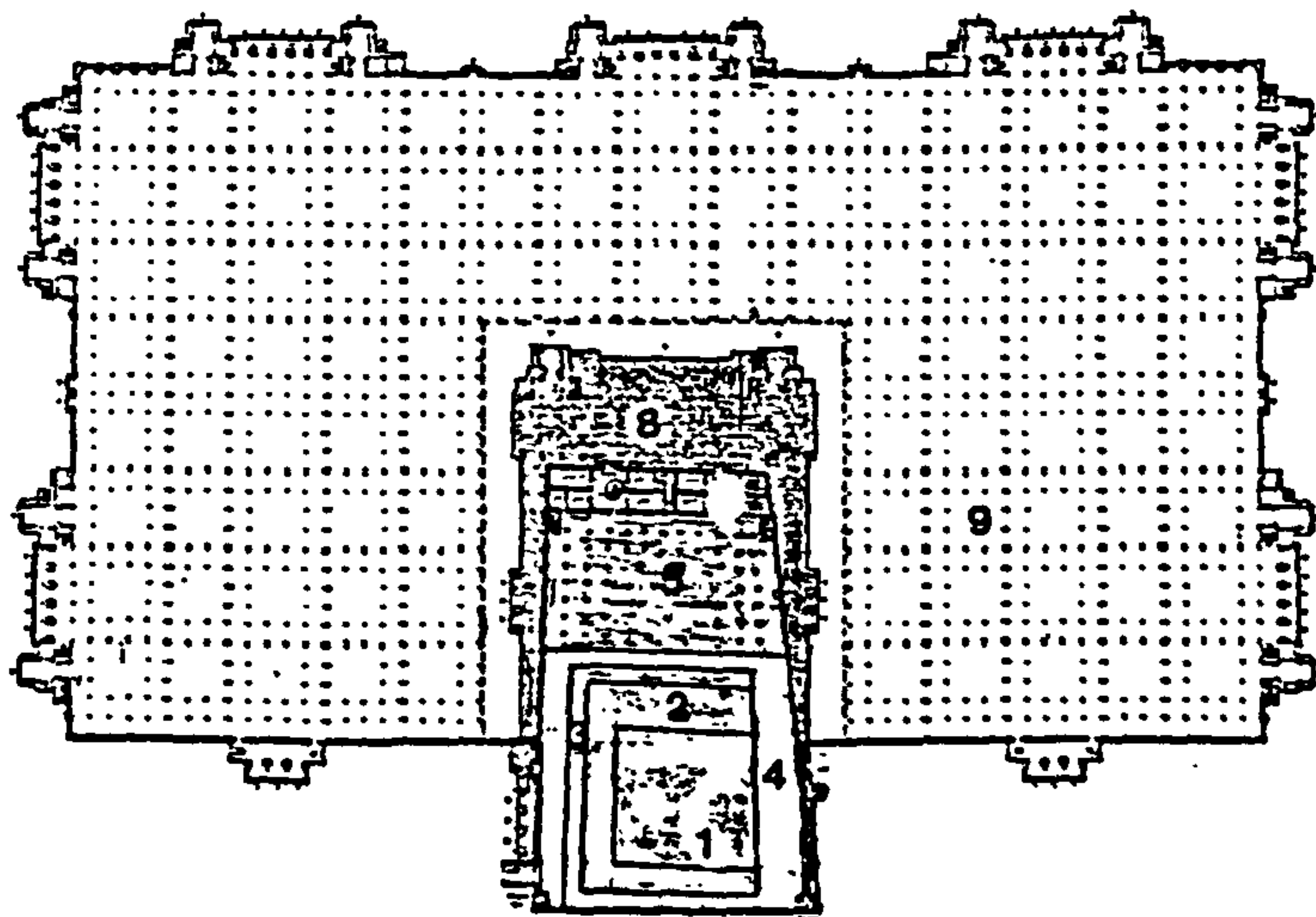
Fig. 3.11. Details of some rwāshīn, in the quarter of Bāb al-Mad̲j̲idī, demolished in 1407/1987.

Source: GACDAR, op. cit., Report No. 13, p.53.

with a height of 92 metres will be added to give a total of ten in all. The number of gates will be increased from eight to seventeen. In addition to stairs, some eighteen escalators will be provided to help people to reach the roof more easily. Other supporting facilities, for example fountains for drinking water and ablution services, have been considered in the extension. Furthermore, the whole building is to be air-conditioned with the plant located outside the city, at a distance of seven kilometres from the Mosque, the two connected by means of underground pipelines carrying cold water. This scheme was proposed because of the enormous size of the machinery, and the resultant noise and air pollution.

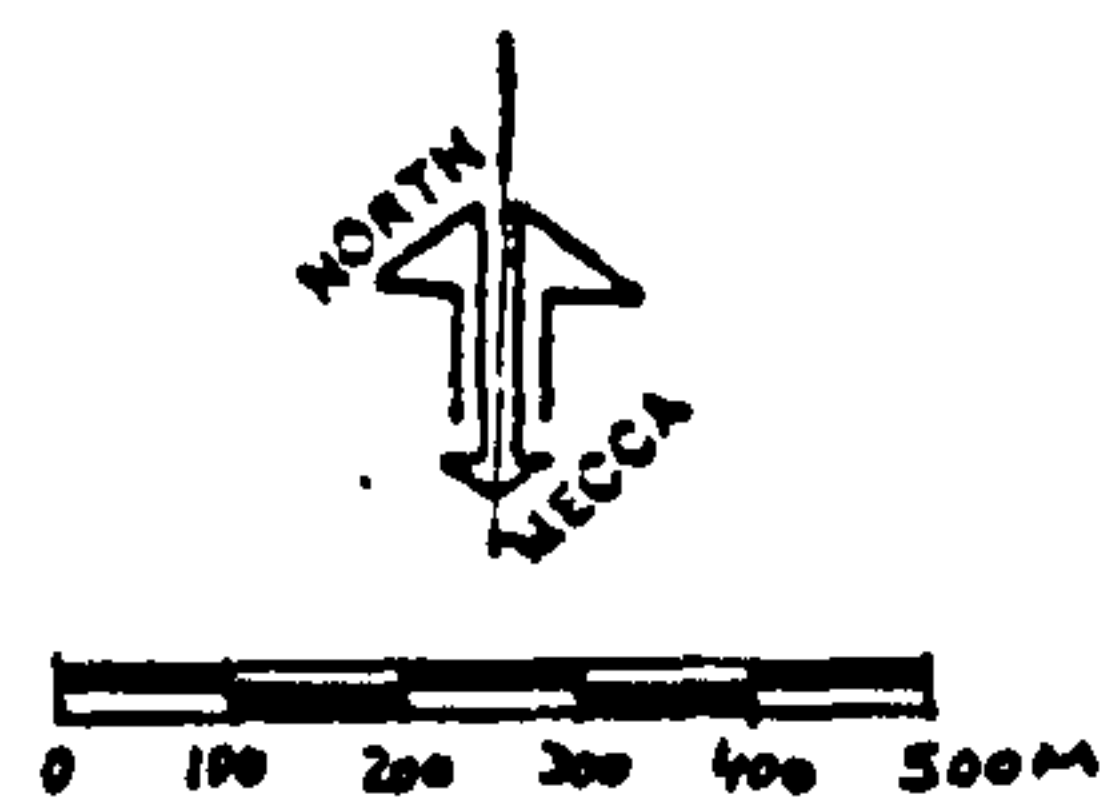
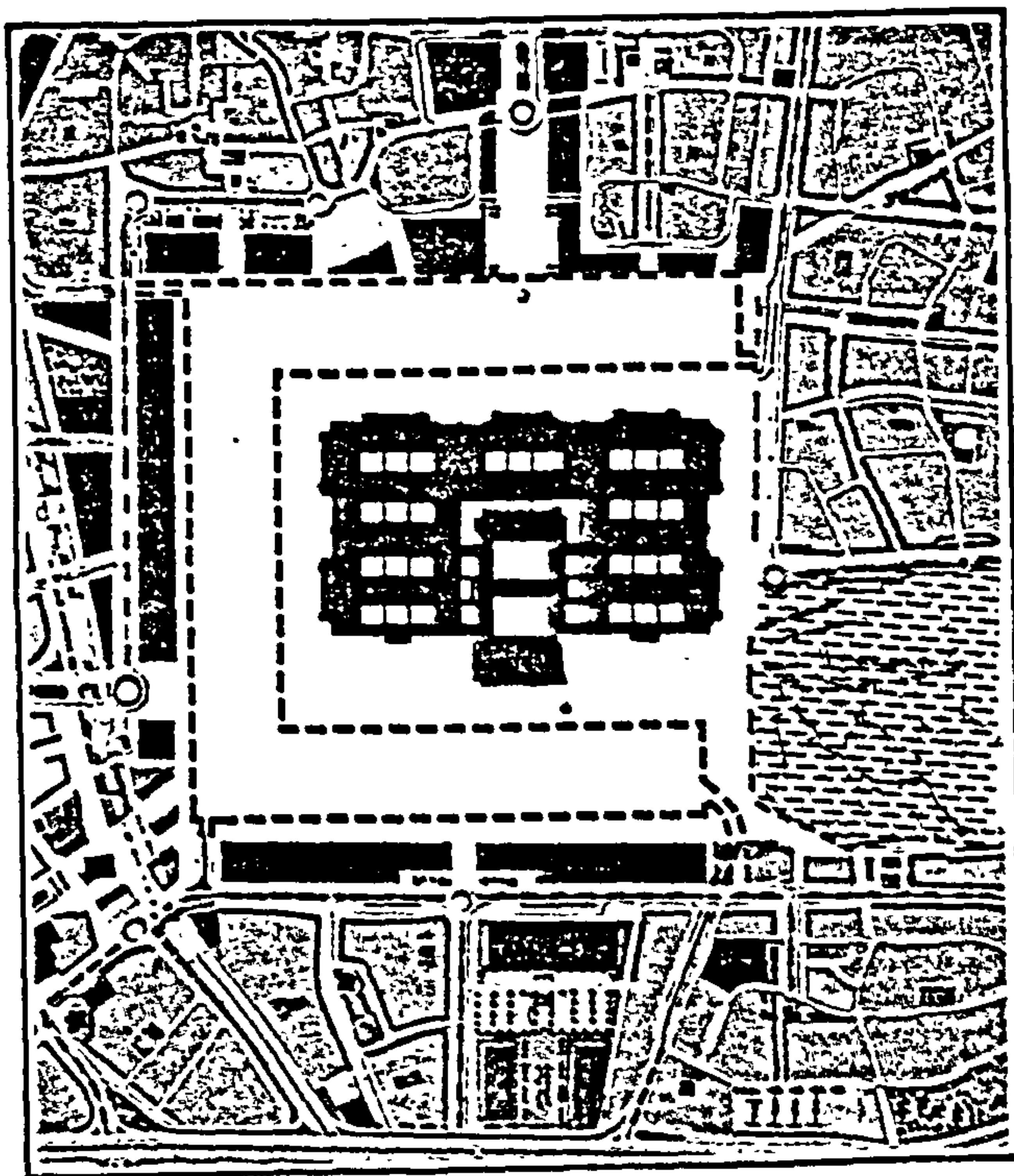
As to the relationship between the Mosque and its surroundings, the Haram has been planned to be completely detached from the buildings around it (Fig. 3.13 and Plate 3.18). It will be encircled by 100-150 metres of open area in all sides, except in the east where the Abi Dhar Street separates the new extension from the old cemetery of al-Bakya^c. This 235,000 square metres of open area will be covered, like the roof of the Mosque itself, with specially treated tiles that do not absorb the sun's heat. About 135,000 square metres of the area will be earmarked for use for prayer in the season of pilgrimage. These could accommodate an additional 250,000 prayer places, which would bring the total capacity of the Mosque and the area around it, to about 500,000 worshippers.

Under this open area some ablution facilities and two storey car-parking will also be constructed. The parking is planned to accommodate about 3,725 cars. Motorists will get to it via the



1. After the enlargement of the Prophet in 7/628.
2. En. of 'Umar, 17/637.
3. En. of 'Uthman, 29/649-30/650.
4. En. of al-Walid, 88/707-91/710.
5. En. of al-Mahdi, 162/778-165/782.
6. En. of Kaibay, 886/1481
7. En. of the Sultan 'Abdulmajid, 1265/1848-1277/1861.
8. En. of King 'Abdulaziz, 1370/1950-1375/1955.
9. En. of King Fahad, 1406/1986-

Fig. 3.12. Enlargements of the Prophet's Mosque.
Source: al-Djūharī, op. cit., p.45.




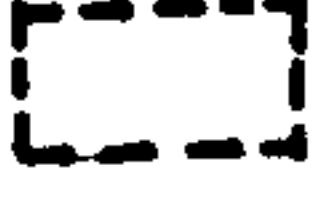



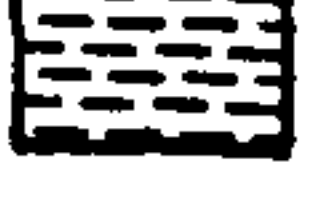
-  the Haram
-  underground car-parking
-  open area
-  shops and offices
-  hotels and apartment blocks
-  al-Bakya^c cemetery

Fig. 3.13. Al-Medina, proposed plan for the Haram Area.
Source: Ibid., p.44.

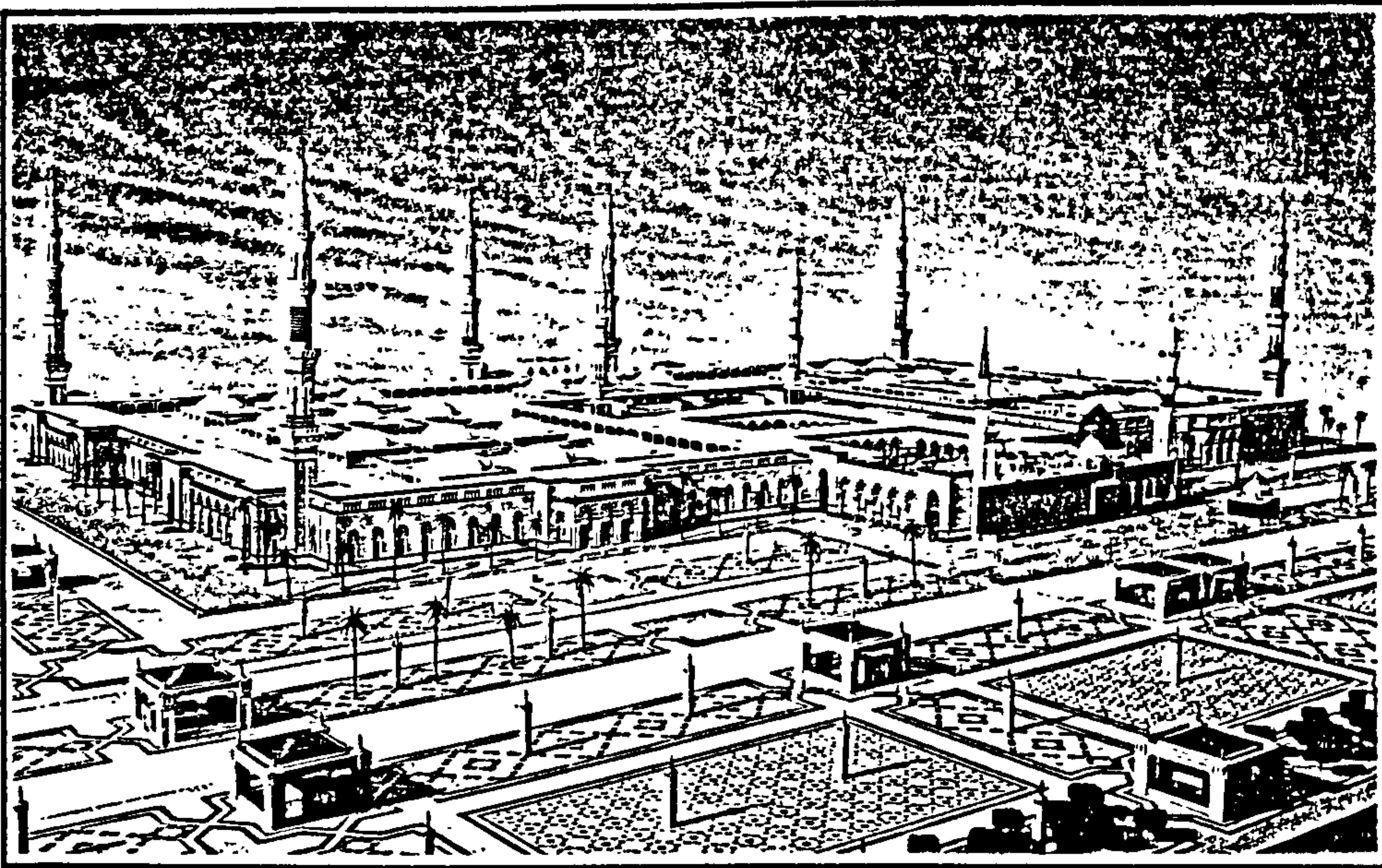


Plate 3.17. Model for King Fahad's enlargement of the Haram.
Source: al-Djūharī, op. cit., p.25.

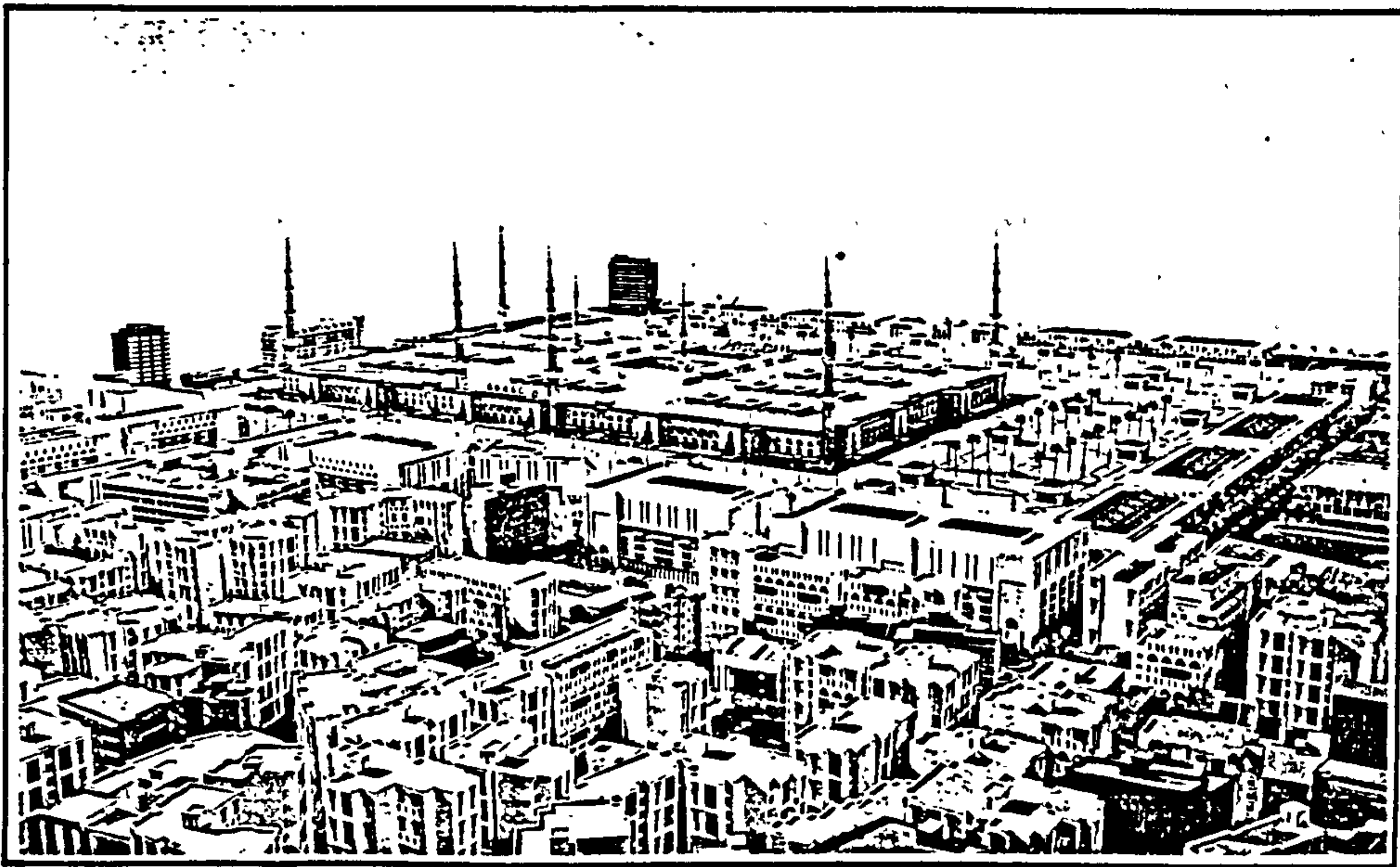


Plate 3.18. Model for the proposed scheme of the Haram Area.
Source: Ibid., p.15.

First Ring Road, through three main streets: King 'Abdul'aziz Street in the north; al-Salām Street, a new road recently opened in the west opposite Bāb al-Salām in the Mosque; and King Fahad Street, another new road opened to the north of the Mosque. Another car-parking area will also be provided at the ground floor level for V.I.P.s and will furnish an additional 272 car-parking places.

The total cost of the Haram extension and the projects accompanying it is estimated at SR.5,700 million. About SR. 5,000 million would be the actual cost of the construction, and SR. 700 million would be paid as compensation to those whose properties were demolished because of the project.

Development of the rest of the area within the First Ring Road was granted to a privately owned company, Sharikat Tayba. Its shares were sold to residents of Al-Medina as well as other Saudi citizens from different parts of the country. The aim of the company is mainly to resolve ownership problems of the land and old buildings in the area, and to develop it in a more profitable way. Vacant lands and the sites of old buildings are, at most, small in size and not suitable for large redevelopment projects. Some of these are owned by awkāf (plural of wakf, pious foundation) that cannot be changed to uses other than those specified by the individuals or groups who dedicated them. Others belong to unknown people or to people who are unable to be located. The company is planning to acquire these properties and compensate their owners, who could become shareholders in the company. In the case where people are unknown or unlocatable, the government will keep the money until some evidence is shown to prove the ownership of the

property. In the awḳāf cases, the people responsible for these will be compensated towards relocation outside the Haram Area.

Once the areas have been acquired they will be cleared of small buildings and redeveloped as a single project, which will include the construction of large multi-storey commercial buildings, such as hotels, apartment blocks, offices and shops [37]. The detailed design of these developments has not yet been revealed, however as far as the height of buildings is concerned the reports of the municipality of Al-Medina indicate that buildings of up to twelve storeys will continue to be allowed in the area [38].

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CHAPTER FOUR:

ASSESSMENT OF THE PRESENT CONDITION OF THE CITY

This chapter is concerned with the present condition of the Prophet's city. It deals with certain aspects of the city which are related to the study and have not been dealt with in the previous chapters. It includes three main sections: the first describes the present land-uses in the city; the second examines the social and economical effect of haji in the city whilst the third section is assigned to an account of the environmental condition.

4.1 GENERAL LAND-USE PATTERN

The Haram, as the focus of life in Al-Medina, occupies the core of the city. As a result of the great demand by both residents and pilgrims for prayer places, it has expanded rapidly during the last four decades. This, together with the new streets that have been widened, has resulted in the wholesale demolition of the old fabric and much of the architectural heritage of the city.

Apart from the historical Mosques of al-Ghmāma, Abū Bakr, ʿUmar b. al-Khaṭāb, and ʿAlī b. Abī Tālib, all that now remains from the old city are some aḥwāsh in the Zūkāk al-Tayar quarter, to the west of Manākha Street. This portion of the suburbs, which developed towards the end of the Ottoman rule, has been left to decay. This area also suffers from the impact of modern streets and high-rise

buildings and as such one may well expect that it will soon be zoned for redevelopment, as has been the case with the other parts of the old city (Fig. 4.2).

The land uses around the Haram, within the boundary of the first Ring Road - referred to in this study as the Haram Area, is dominated by commercial activities and accommodation facilities (Fig. 4.1). This mix resulted from the wish of both residents and visitors to stay close to the Haram, in order to perform the five daily prayers there, together with the demand from both groups for commercial services.

However, the increasing land prices and consequently the high rents in the area have driven most of residents to live in the outskirts of the city. These trends were further encouraged by the universal use of motor cars and the expansion of community facilities.

To some extent this eliminated the competition between the local people and the visitors for accommodation in the Haram Area. Nevertheless, demand still persists as a result of the growing number of pilgrims and clearance of buildings in the area.

Many of the old traditional houses and low-density buildings, constructed in the 1950s and 1960s have been replaced with new high-rise hotels and apartment blocks, of six to twelve storeys (Fig. 4.3). The ground floors of these buildings are occupied by commercial activities catering for both pilgrims and the local population. The items on sale are mainly books, clothing, electronic goods, jewellery, watches and household equipment. A number of banks, airline and travel agents' offices are also beginning to emerge.

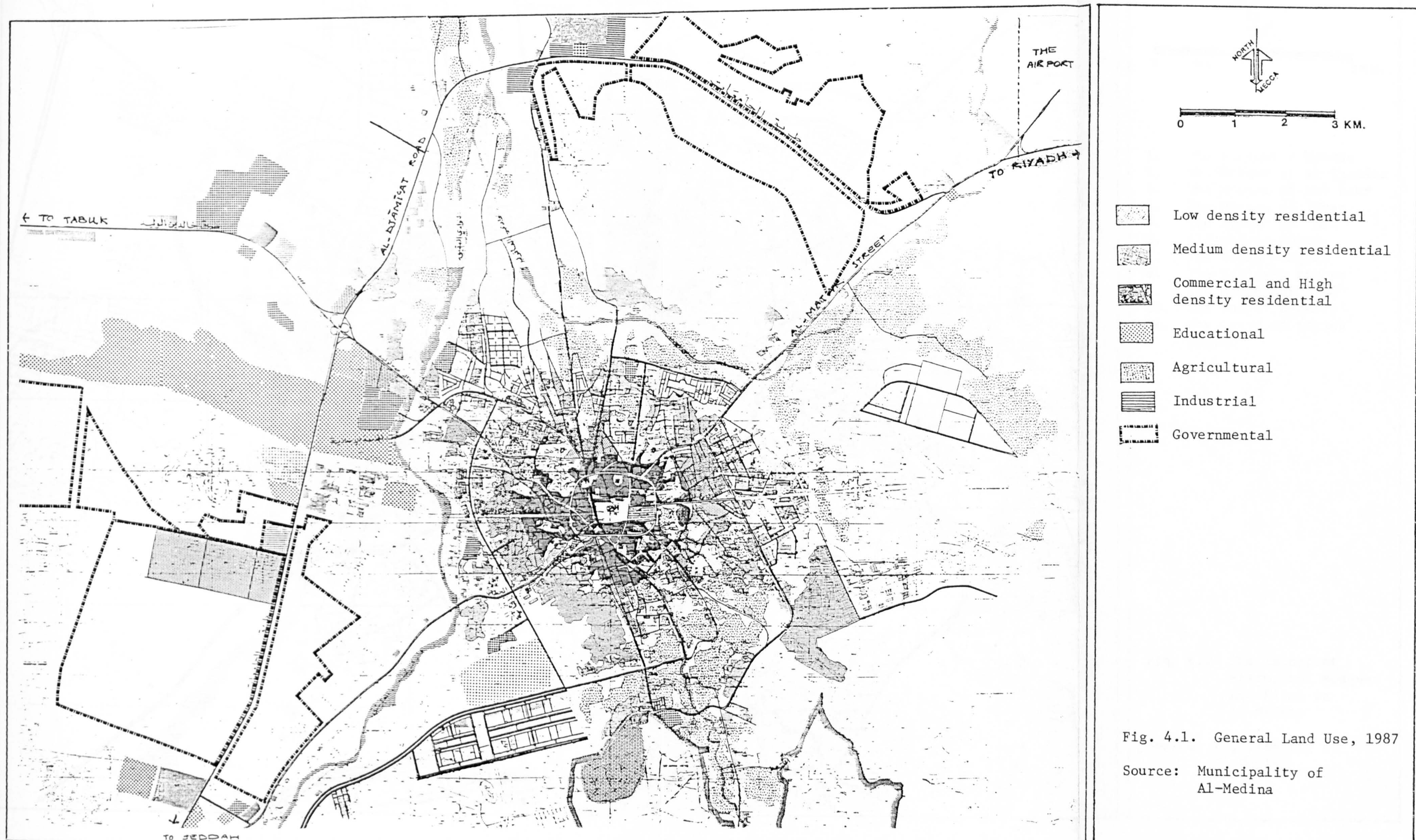


Fig. 4.1. General Land Use, 1987

Source: Municipality of Al-Medina



1. The Prophet's Mosque
2. The Mosque of Al-Ghamāma
3. The Mosque of Abū Bakr
4. The Mosque of 'Umar
5. The Mosque of 'Alī
6. Al-'Anbarya Mosque
7. The Seven Mosques
8. The Kiblatīn Mosque
9. The Mosque of Kubā'
10. The Bakya' Cemetery
11. The Grave of Saydna Ḥamzah

Fig. 4.2 The Important Historical Mosques and Sites in Al-Medina

Source: Municipality of Al-Medina

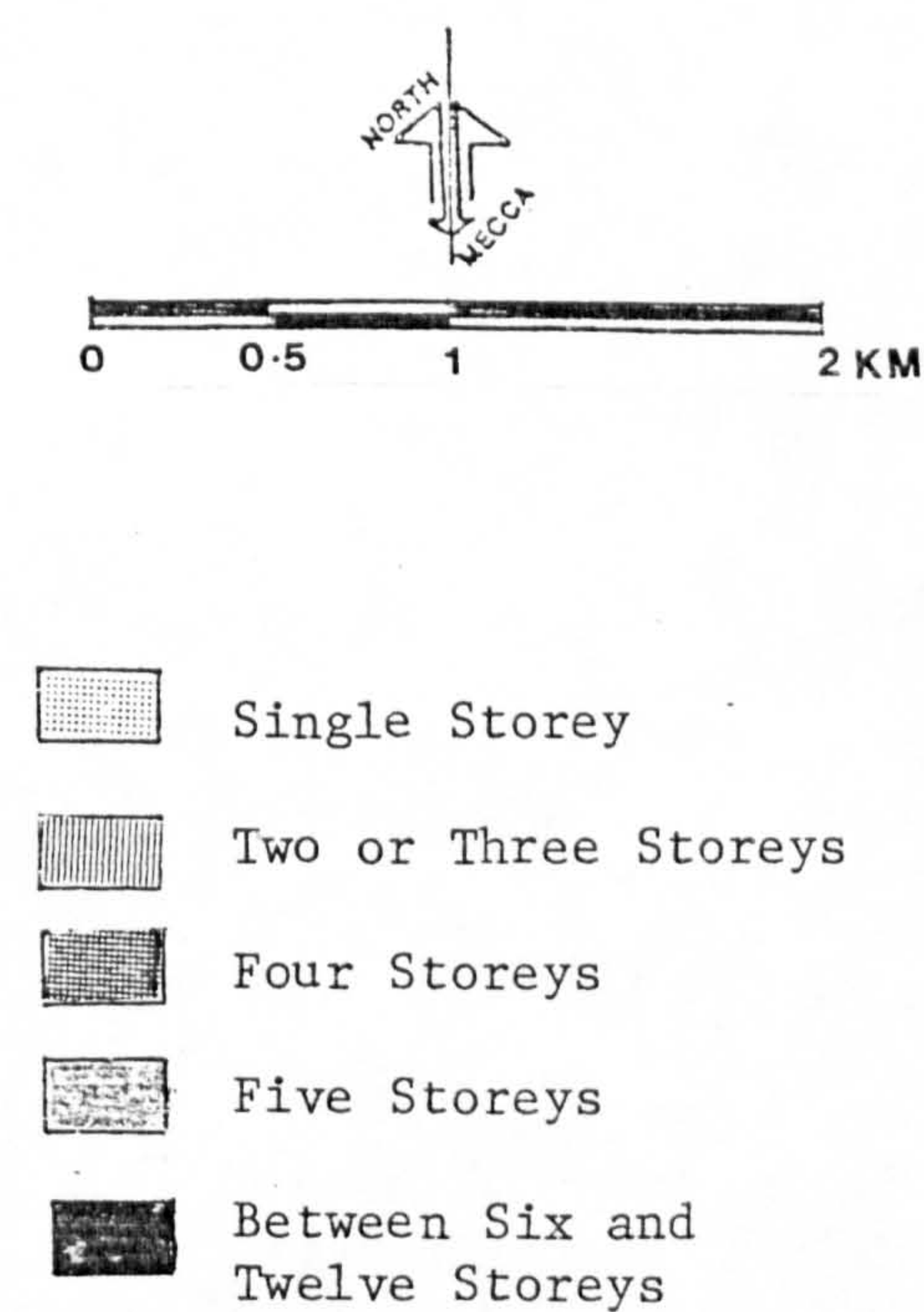
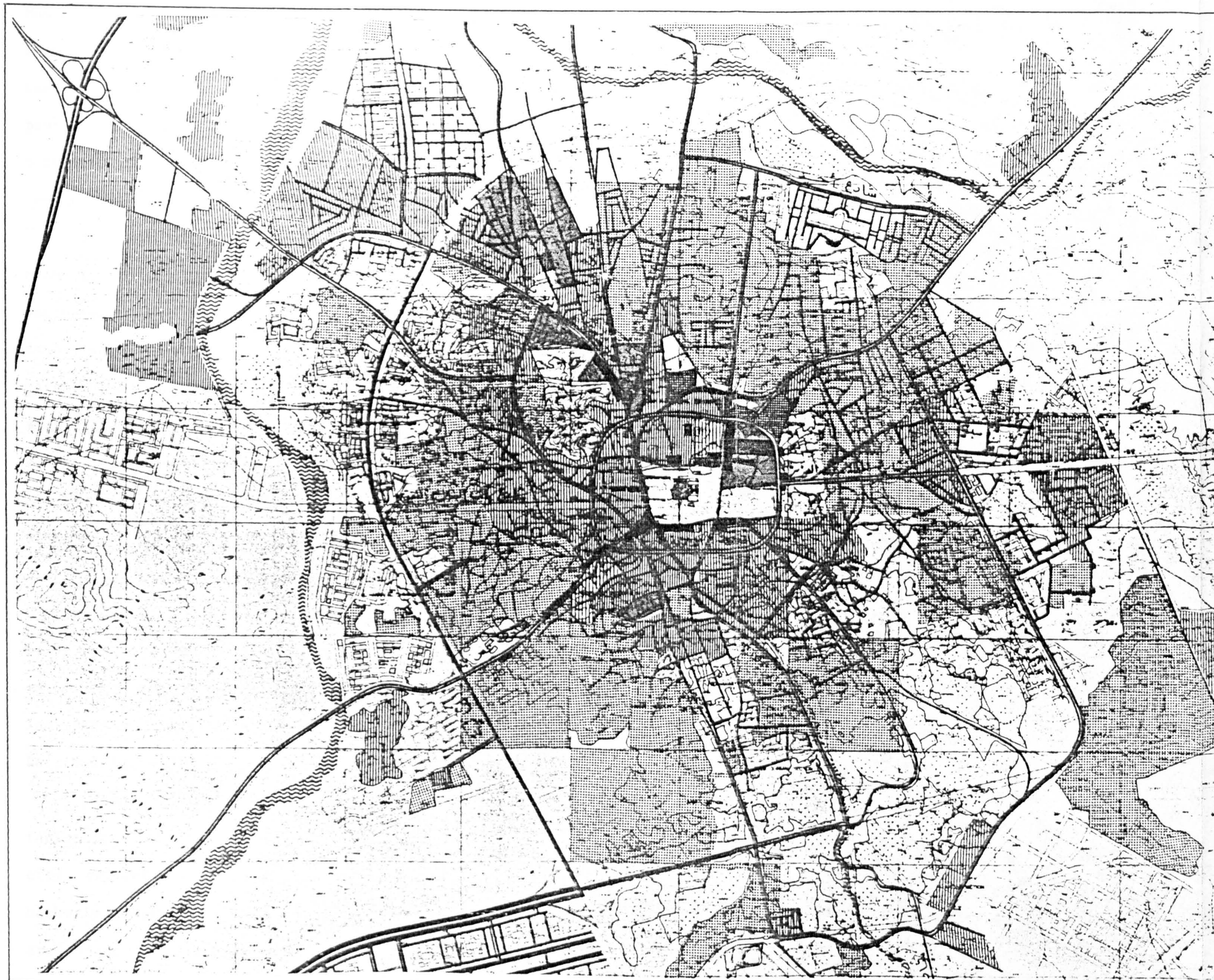


Fig. 4.3 Height of Buildings,
1987

Source: Municipality of
Al-Medina

Residential density in the Haram Area, according to the Municipality of Al-Medina, ranges between 250 and 450 people per hectare (Fig. 4.1). However, in the quarters somewhat further from the Haram, a medium density residential use, between 150 and 250 people per hectare, prevails. The residential developments on the outskirts of the city are mainly of low density, 40 to 150 persons per hectare [1].

Commercial activities outside the Haram Area are concentrated along the streets branching from the First Ring Road. Businesses have moved to these locations as a result of the demolition of the old commercial and residential quarters around the Haram, in the 1970s and 1980s. The ground floors of most buildings along these streets have been turned into shops and department stores. In a short period of time these streets, such as the Down and Up Kubā' Street, have become major commercial centres which are starting to compete, in this respect, with the Haram Area.

In addition to the historical Mosques, and the old cemetery of the Bakya' in the Haram Area, other historical buildings and sites can be found in the city. Such buildings include the Mosque of Kubā', the Kiblatīn, and the Seven Mosques, while the sites include the graves of Saydna Hamzah and that of the Martyrs of Uḥud Battle (Fig. 4.3).

Local community services such as schools, Mosques, health facilities and governmental offices are scattered throughout the city, reflecting the needs of the population; while buildings for higher education, such as the Islamic University and other colleges, are concentrated in the west of the city, along the Djāmī'āt Road. Large areas reserved for government uses also lie along this road.

However, green areas and open spaces are scarce in the city and limited to a few small parks and playgrounds (Fig. 4.1).

Industry played a significant role in the city's economy from early times. Some traditional crafts were developed to cater for local urban and nearby rural and nomadic populations as well as visiting pilgrims. These included, for example, goldsmiths and silversmiths, making bracelets, necklaces, rings and other jewellery; coppersmiths and brasssmiths, making pans for cooking, tea and coffee pots, and some ornamental articles. Woodwork also developed, particularly towards the end of the Ottoman rule, and many fine wood carvings were produced for decorating doors, windows and rwāshīn, illustrating the high quality of craftsmanship in this field. Pottery was an equally important industry, supplying earthen water-jars for cooling water. These were produced in different shapes and sizes, the larger ones are called azyār and the smaller ones shrāb. Some handicrafts were dominated by women and usually carried out in homes or farms. These included spinning and weaving woollen carpets and saddle-bags; and producing mats (ḥuṣūr), baskets, fans and sweeping brushes from palm leaves [2].

These traditional crafts have almost disappeared, principally, as a result of the improvement in the economy, modern education and new job opportunities, together with competition with imported modern goods. However, if some attention had been given to these crafts they would have developed into viable enterprises, particularly because the pilgrims value any product associated with the Prophet's city.

Today, however, the contribution of industry in the city's economy is not so significant. It is mainly confined to some light

industries, such as garages for repairing cars and small workshops for making zinc water containers, iron gates, and some woodwork. These activities have recently been attracted to locations in the outskirts of the city, the main reasons being ease of access and low rents. Such examples are Maṭār Street in the north-east; Tabuk Road in the north; and the southern end of Ḳurbān Street, in the south. There are also a few small factories for packing dates; a plant for bottling drinking water in the 'Aayn al-Zarḳā' area; a plastics factory in Abyār 'Alī, about 10 kilometres to the south of the city; and a modern complex for printing the holy Koran and other religious texts, in Tabuk Road. Finally, an area measuring 85 hectares was recently allocated for industry in Abyār 'Alī [3].

The agriculture that formerly surrounded the city has been considerably reduced for several reasons. Firstly, urban sprawl in the 1950s and 1960s overtook the farms immediately encircling the city. The newly constructed roads which passed through cultivated areas and high land prices encouraged many people to give up farming. The land was then divided into small plots and sold for building houses and other urban developments. Secondly there was the fall in the water table as a result of the unprecedented demand for water and its excessive extraction by tube wells. According to GACDAR, in recent years the water table has been lowering by about one meter per year [4]. Thirdly, as with craft industries, the new opportunities that the oil-driven economy brought about encouraged farmers to seek other employment in the higher paying economic sectors such as the trade and construction industries. Finally and perhaps most importantly, is the absence of a sound planning policy and development control measures for preventing conversion of such

lands to urban use.

Thus, the agricultural land within the confines of the Second Ring Road has been reduced to small areas within al-‘Awālī, Kurbān and Kūbā’ in the south; Sayad al-Shuhadā’, in the north; and some new areas in the Ḥarah al-Sharkya, in the east. These areas totalled 677 hectares by 1978, but during that year the total fell by 150 hectares to 527. Whereas in the area stretching from beyond the Djāmi‘āt Road in the north, to the ‘Ayn al-Zarkā’ in the south, the total area cultivated fell from 2100 to 1500 hectares at the same period [5].

4.2 SOCIAL AND ECONOMIC EFFECTS OF HADJ

Muslims are encouraged to visit Al-Medina in order to pray in the Prophet's Mosque. As mentioned in Chapter One, the zyārah (the visit to Al-Medina) unlike the hadj, can be undertaken at any time throughout the year. However, most people, especially those who have come from outside Saudi Arabia, take the opportunity, when they come to the hadj to perform also the zyārah. There are also some other occasions when the numbers of visitors to the city increases, but not to the level experienced in the season of pilgrimage. Such times are the month of Ramḍān, in which the ritual of fasting is observed, and during the mid-term school holidays.

The pilgrimage season in Al-Medina normally lasts for about 45 days, divided into two periods: before and after the actual days of hadj (from the eighth till the twelfth of Dhū al-Ḥidja, the twelfth month of the hejira calander). These are known locally as

the first, and second seasons of ḥadj. Data about the number of visitors in the city are confined to the season of pilgrimage and only to those who come from abroad, excluding citizens of North Yemen Bahrain, Kuwait, Qatar, Oman and the United Arab Emirates. In addition, the data only go back to 1986, the year in which the National Organization of al-Adillā' (pilgrims' guides in Al-Medina) first started to keep daily records of the number of visitors arriving and leaving the city. From this information the number of pilgrims from overseas, except those from the countries mentioned above, can be calculated. Despite the limitations in the data, the figures will be used here to shed some light on the fluctuation in numbers of visitors to the city within the season of pilgrimage.

The 1406/1986 records of the National Organization of al-Adillā' show that visiting pilgrims started to arrive in Al-Medina from the end of the tenth month of the Hejiri calander, Shwāll. As shown in Fig. 4.4, in the first day of the next month, Dhū al-Ḳiḍdah/July 8th, 1986, there were only 1928 pilgrims in the city. During the first week of Dhū al-Ḳiḍdah the number of pilgrims had risen gradually, and by the end of the week there were 7113 visitors in the city. In the next three weeks, however, the numbers were increased rapidly, and by the middle of the fourth week (Dhū al-Ḳiḍdah 26th) these had reached the peak of 210,023 pilgrims. After that the numbers started to decline sharply and by the end of the first week of Dhū al-Ḥidja, according to the statistics, there were only 261 pilgrims remaining in Al-Medina. This number could account for those who were unable to travel on to Mecca for the pilgrimage, through illness or other reasons.

In the second week of Dhū al-Ḥidja all pilgrims stay in

Mecca and the holy sites around it. They start to come to Al-Medina from the beginning of the third week, during which their numbers in the city, rise rapidly. The peak of the second season, however, was in the first day of the third week (Dhū al-Ḥidja 22nd) in which the number of pilgrims in the city rose to 129,235. After that it decreased steadily and by the end of the first week of the next month, Muḥaram (the first month of the Hejira calander), almost all overseas pilgrims had gone back to their home countries. The graph also shows that the number of pilgrims in the city exceeded 100,000 for only 22 days. This was during the 15 days between Dhū al-Ḳiḍah 16th and Thū al-Ḥidja 3rd, and the seven days between the 18th and the 26th of Thū al-Ḥidja. However, the numbers exceeded 150,000 for 9 days, between Dhū al-Ḳiḍah 20th and Thū al-Ḥidja 1st.

As to the Saudi citizens and residents of the country, many of them, as stated earlier, try to avoid visiting the city in the season of pilgrimage. However, those who choose to combine the ḥadj with zyārah, normally come to Al-Medina between the 4th and the 16th of the month of Dhū al-Ḥidja. During this time governmental employees and other workers are given a holiday for the ḥadj. Thus its unlikely that these visitors would have a significant affect on the peaks of the numbers of pilgrims in the city in both the first and second seasons of ḥadj.

According to the 1986 records of the National Organization of al-Adillā', 680,175 pilgrims visited Al-Medina. In the same year, the number of overseas pilgrims, excluding those who came from North Yemen, Bahrain, Kuwait, Qatar, Oman and the United Arab Emirates, was 788,859 [6]. This would mean that about 86.2 per cent of these pilgrims visited Al-Medina. If this percentage is

applied to the total number of pilgrims from outside Saudi Arabia, this would put the estimated total number of foreign pilgrims who visited Al-Medina in 1986 at 738,685.

The influx of such large numbers of people obviously has an enormous economic impact on the city. It creates a great demand for goods and services which is extended to almost every sector of the region's economy. During their stay in the area, pilgrims spend a considerable amount of money on subsistence, travel in execution of their religious duties and in purchasing gifts and souvenirs.

According to the findings of the writer's survey, which will be discussed in detail in Chapter 7, the amount of money that the pilgrims spent in 1986 on their daily basic requirements (accommodation, transport, food, ... etc.) was as follows: 44.1 per cent spent less than 60 SR.; 20.3 per cent spent from 60 up to 90 SR.; 20.8 per cent spent from 100 up to 199 SR.; 7.4 per cent spent, from 200 up to 399 SR. and the rest (7.4 per cent) spent 400 SR. or more. In regards to spending in purchasing gifts and souvenirs during their stay in the city, the survey revealed that: 9.9 per cent intended to spend less than 100 SR.; 15.8 per cent indicated from 100 up to 299 SR.; 24.6 per cent indicated from 300 up to 699 SR.; 19.7 per cent indicated from 700 up to 1499 and the remaining 30.0 per cent would spend more than 1500 SR.

GACDAR estimated the number of pilgrims, from both inside and outside the country, who visited Al-Medina in the 1978 hadi season, at 1.1 millions. Based on a sample survey, their total expenditure in the city was estimated at SR. 1,633 million, with an average pilgrim spending around SR.1500. The breakdown of these

expenditures into the different aspects of the economy, suggests that more than two-thirds (68.9 per cent) of the money was spent in purchasing gifts and souvenirs from the city; while, 13.5 per cent was spent on accommodation, 13.2 per cent on food, 2.5 per cent on transport, and the rest (1.8 per cent) on miscellaneous items (Fig. 4.5) [7].

There is no doubt that this high expenditure gives a powerful impetus to the city's economy. It is evident in the major activities that owe their existence to pilgrimage, such as the pilgrims' guides organizations and the companies which transport pilgrims between the cities of Mecca, Al-Medina and Jeddah. Also, in the high demand for goods and other services, for example the provision of accommodation, restaurants and inter-city transport. Nevertheless, the actual contribution of the pilgrimage to the city's economy, as well as the national economy of Saudi Arabia as a whole, is substantially reduced by the losses through imported goods and the expatriate labour force. The draining of a large proportion of pilgrimage income to outside the country, particularly through the former, is unmistakable. Apart from dates, almost all the items the pilgrims purchase to take back home, and where more than two-thirds of their money was spent in 1978, are imported. Thus the local crafts industry, discussed earlier, which until quite recently had represented the traditional occupation of many citizens in Al-Medina, and provided the pilgrims with their souvenirs and gifts to take home, should be given the first priority in the development of the city's economy.

On the other hand, the seasonal nature of the hadi causes a tremendous strain on community resources. Many of the facilities

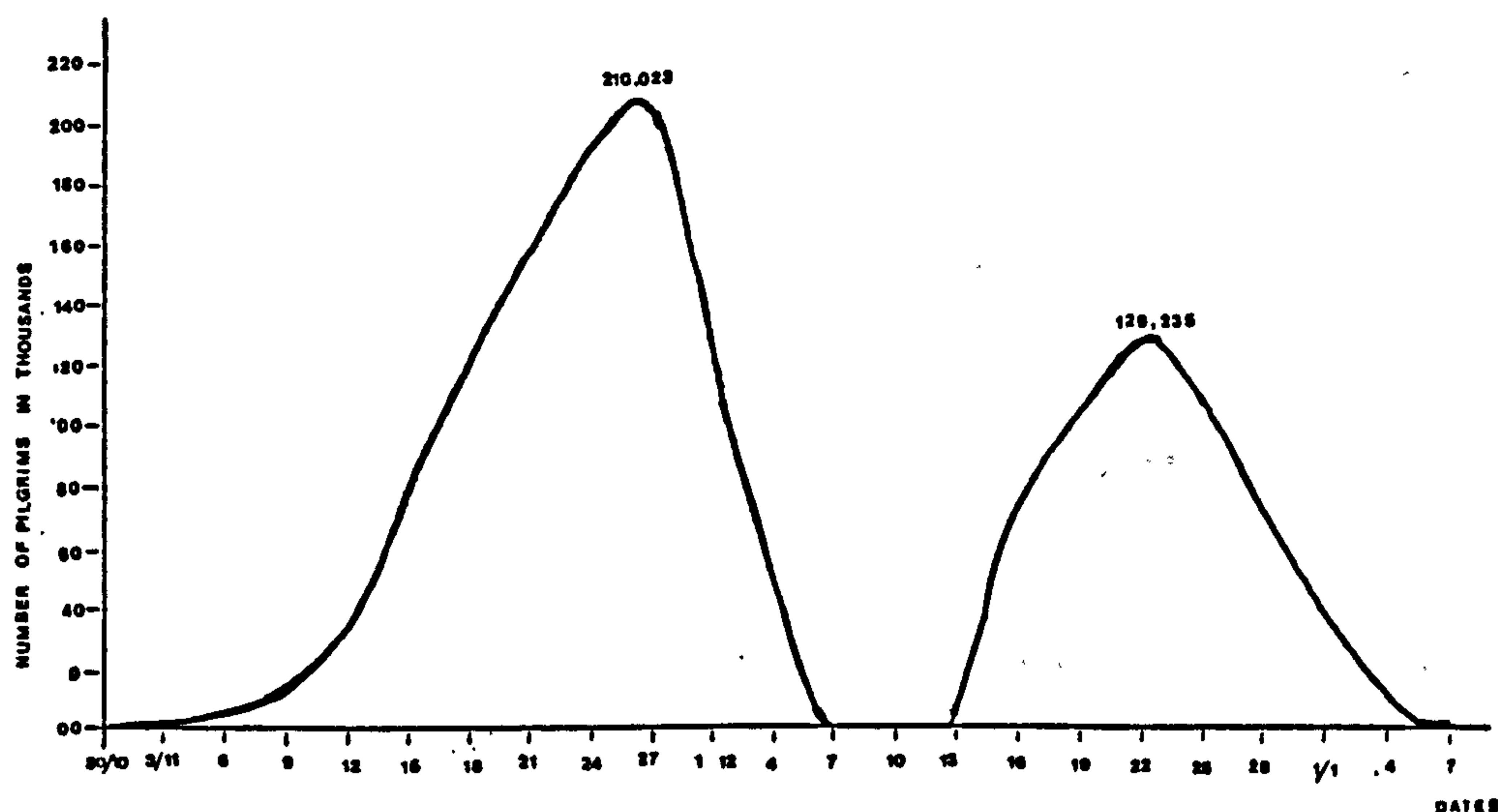


Fig. 4.4 Number of Overseas Pilgrims (excluding those who came from North Yemen, Bahrain, Kuwait, Qatar, Oman and the United Arab Emirates) in Al-Medina in the hadj season of 1406/1986.

Source: Based on unpublished data obtained from the National Organization of al-Adilla , Al-Medina.

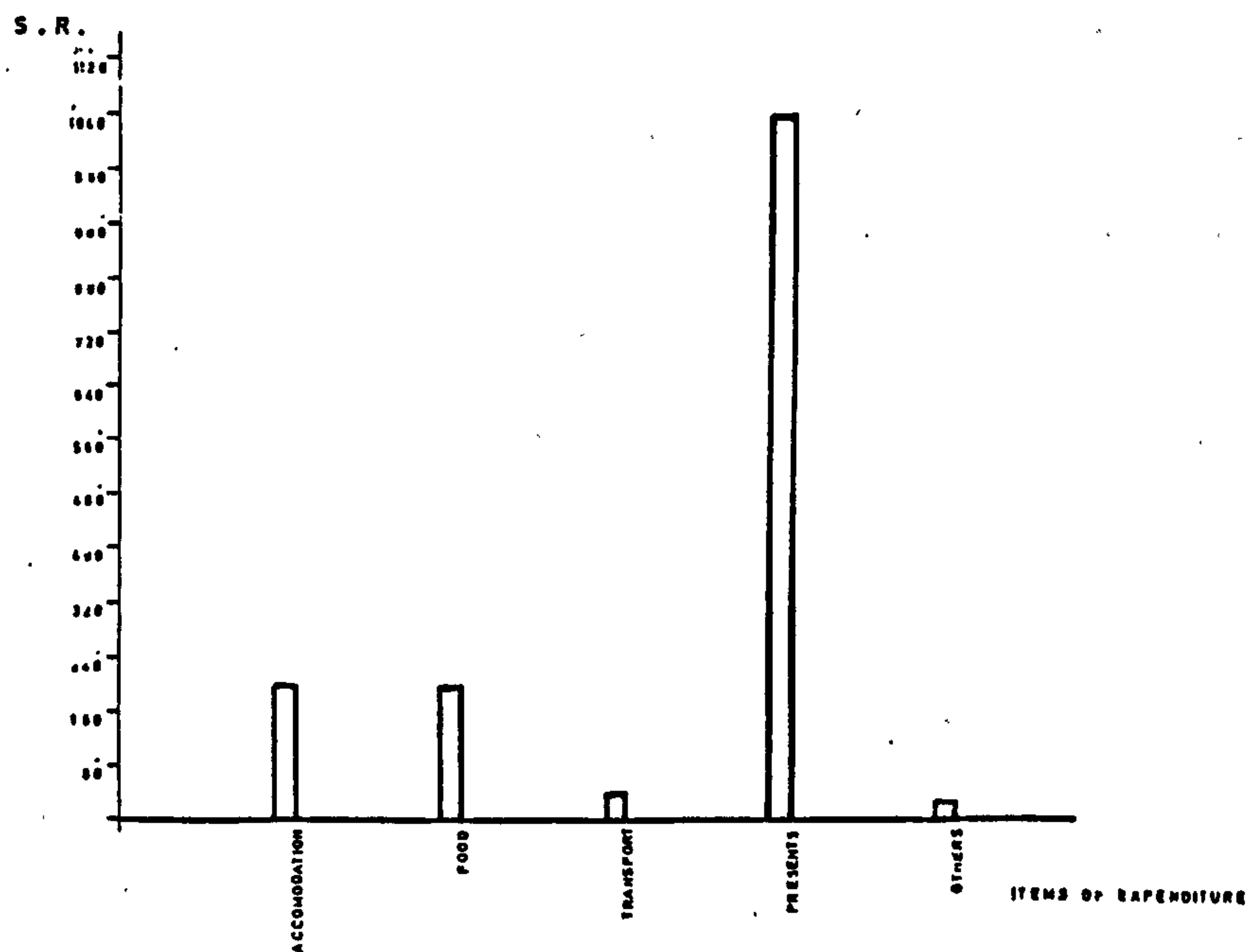


Fig. 4.5 Average Expenditure of a Pilgrim in Al-Medina in 1978.

Source: GACDAR, op. cit., Report No. 5, V. 1, p.155.

provided for pilgrims are either under-utilized or totally unused outside the short season of pilgrimage, yet the cost of their provision and maintenance is enormous. These include, for example, accommodation, roads, transport vehicles and health services. Whether these are furnished by the private or the public sectors, they tie up resources which could be invested in more socially useful and cost-effective developments.

With regard to the pilgrimage accommodation (which will be dealt with in some depth here because of its direct link with the developments around the Haram) the seasonal fluctuations had not only resulted in the under-utilization of resources in the off-season but also in a deterioration of the standards of services in the season of pilgrimage, which affects the pilgrims themselves. Buildings within the Haram Area mainly cater for pilgrim accommodation. These included hotels, guest-houses, and apartment buildings. These facilities are only fully utilized in the brief season of hajj. For the rest of the year, hotels and guest-houses are partly unoccupied, while many of the apartment blocks are completely unused. Many landlords of such buildings keep their properties closed throughout the year, only letting them during hajj. Such practices are encouraged by the high profits derived from renting accommodation to pilgrims in the season of hajj, which are much greater than a year's rent to local tenants.

In order to make a profit in the short period of pilgrimage and counterbalance the loss from no rental during the remainder of the year, overcrowding of rooms and inadequate facilities in flats have become common practice in Al-Medina. In the Haram Area, may be up to nine people accommodated in a room designed for one or two

persons (see Chapter 7). Provision in many cases are limited to ^tmatresses for sleeping, air-conditioners and a supply of cold water.

It is clear that on present practices in the services associated with the hadj there is bound to be either a severe shortage in the pilgrimage season or the wasting of resources through under-utilization of capacity, during the rest of the year. Thus, the policy of building more housing for pilgrims which has been adopted by the government, can only aggravate the problem. It seems that a better solution would be to make the maximum use of the existing facilities. The hadj season is currently - and it will continue to be for the next few years - in the summer season during which educational establishments are given holidays. At the time when the hadj season does not coincide with summer holidays, some adjustment can be made by extending the country's two-weeks hadj holiday, which is normally given to governmental institutions that unrelated to the pilgrimage, to four ^bweeks for the educational establishments in the city of Al-Medina. In this way, accommodation provided by the Islamic University and the many other colleges and educational institutions for students from outside the city, can be utilized for pilgrims' housing. These are fully equipped for the purpose and ready for use since most of the students spend such occasions with their families.

In addition, other buildings of such institutions as well as elementary, intermediate and secondary schools in the city could be provided with basic facilities and used for pilgrims' accommodation. According to the Municipality of Al-Medina, there were 181 boys and girls elementary, intermediate and secondary schools in the city in

1987. The number of schools required in 1990 is estimated at 224, and 399 in 1995 [8]. If these facilities were used they would accommodate a large proportion of the number of pilgrims and compensate against the need for building an equivalent number of places in new towerblocks in the Haram Area.

Most of the schools and colleges have their own buses which could be used in transporting pilgrims from their accommodation to the Haram and other religious sites in the city. The staff of these institutions could supervise the services required by pilgrims accommodated in their establishments. Besides which, they could offer another service, namely education, which is badly needed by pilgrims and cannot be provided effectively otherwise. Many of the pilgrims are not only uninformed about the rituals of the zyārah and ḥadj but also about other basic aspects of their religion. Staff and students of the Islamic University in particular, who come from different parts of the Islamic world and consequently speak many languages, and those who teach religious subjects in schools and other institutions, are well qualified for the purpose.

For a further utilization of available facilities, the people of Al-Medina and especially those who live near the Haram could be encouraged to accommodate pilgrims in their own houses during the season of pilgrims. This might be achieved by a good public campaign. Residents could release parts of their houses and rent or donate them to pilgrims as they always did in the past and a few still do today. This would be made much easier if such possibilities were considered in the design of new buildings. In addition to alleviating the increasing demand for pilgrims' housing this could be of mutual benefit and interest for both residents and

pilgrims. It would provide more local families with extra annual income and enable them to learn something of the culture of the pilgrims' home countries. At the same time pilgrims would be able to communicate with more local people and benefit from their services. By doing this the people of Al-Medina would return to their historical role as the hosts of the guests of God.

Finally, the under-utilization of the existing facilities and the seasonal fluctuations of the city's economy in general, could be reduced by encouraging visitors from within Saudi Arabia and abroad to make the ʿumrah (visiting Mecca) and zyārah in the non-season of pilgrimage. As mentioned earlier, these rituals, unlike the hadj can be performed at any time. This would not only stimulate the local economy all year round but also would reduce the number of visitors and length of stay in the city during the hadj time. People who had made the zyārah, which is not obligatory in the first place, would feel less bound to do so again or would stay for a shorter time when making the hadj.

In this connection, a campaign similar to those launched by tourist countries wanting to draw more people to their resorts, could be organized. Package holidays for ʿumrah and zyārah at a reasonable prices and with better services would encourage many Muslims to come to the holy places in the off-season of pilgrimage.

4.3 THE ENVIRONMENTAL CONDITION

The Prophet's Mosque has been the centre of all the activities in Al-Medina since it was first built. Until the 1950s

the city had evolved around the Mosque as a natural extension to it. Some houses even shared the same wall with it. The main streets radiated from the Mosque and often faced its gates. The green dome and the minarets of the building dominated the skyline of the city, communicating the spiritual message of the place. They reminded the people they had arrived in the Holy City and guided first-time visitors to the Mosque.

Today, however, the Mosque is isolated from its surroundings and the integrity of the Holy City is lost. This was an inevitable result of the successive demolition of the historical quarters and encircling the Mosque and its extension with urban elements which are incompatible with the spirituality of the building. Inside the Mosque one is occupied by the overwhelming religious feeling, which is enhanced by the inspiring atmosphere in which the person finds him or herself. The grandeur of the building and the tens of thousands of fellow Muslims from all parts of the globe, gathered in one place, yet each one engaged in a form of worship of one sort or another, until the time of the congregational prayer starts when they stand equally in rows, can only suggest the oneness of God and the nearness to Him. In contrast, immediately outside the Mosque one is suddenly pulled out of this peaceful environment and is confronted with large areas of car-parking and crowded streets with screeching vehicles and traffic noise, as if one leaving a busy airport or railway station (Plates 4.1 and 4.2).

In addition, the area is dominated by high-rise hotels and apartment blocks of nine to twelve storeys high. These faceless concrete towers replaced the traditional two to four floor stone buildings with magnificent wood lattice facades. Modern structures



Fig. 4.1 Al-Medina, general view of the Haram Area: looking East, 1987.



Fig. 4.2 Al-Medina, al-Sāḥa Street, 1987.

are not only disrespectful of the human scale but also compete in height with the majestic minarets of the Haram and overshadow the actual Mosque and other historical buildings in the area. These modern buildings moreover, are poorly designed utilitarian blocks, lacking imagination and bearing no relationship to the area in which they are built. They exist in a "nowhere". They are not related to the Mosque and the traditional architecture of the area, nor even to each other, but live their abstract lives as isolated individuals (Plates 4.3 - 10).

As a result of adopting Western planning concepts, streets and squares on a traditional scale, usually covered or provided with arcades, are not longer found in the city. They were replaced by wide and straight streets or ring-roads, and car-parks. These make walking extremely difficult. Even if one can escape the hazards caused by the mixed pedestrian and vehicular traffic, one will not be able to avoid the risk of sunstroke resulting from the lack of shade. This is evident in the increasing number of cases treated in the summer season, and the number of temporary clinics set up for this purpose in the pilgrimage time.

In addition to the destruction of the unique character of the city centre, these modern streets have created more vehicular traffic problems than they have solved. The new streets encouraged more traffic in the area which led to the construction of the overhead bridge along the southern section of the First Ring Road. This not only further exposed the area to traffic but also added another unsightly feature to the city centre which destroyed the scale of the small historical mosques and other buildings around it and contributed further to the isolation of the Haram Area and

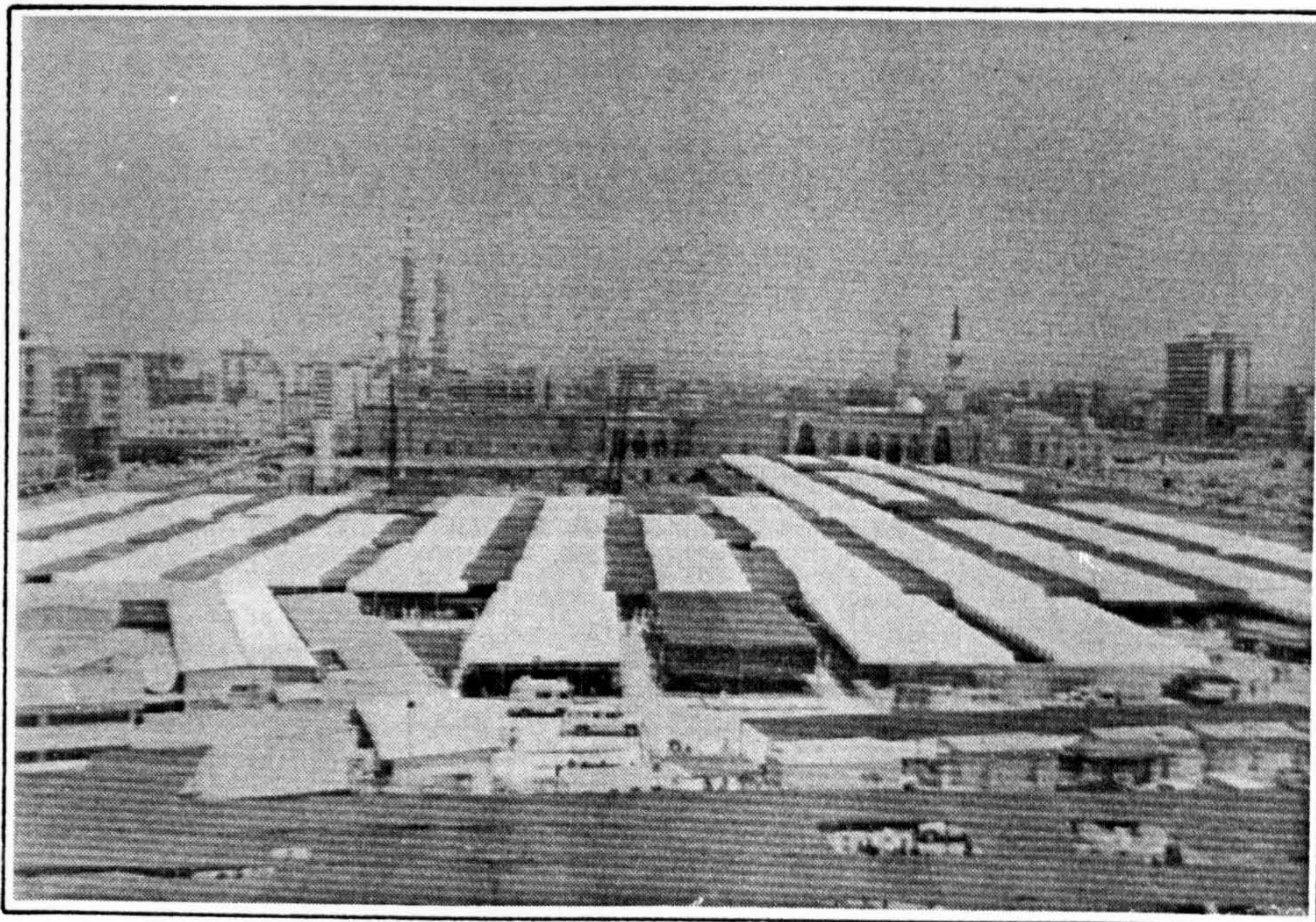


Fig. 4.3 Al-Medina, general view of the Haram Area: Looking East, 1987.

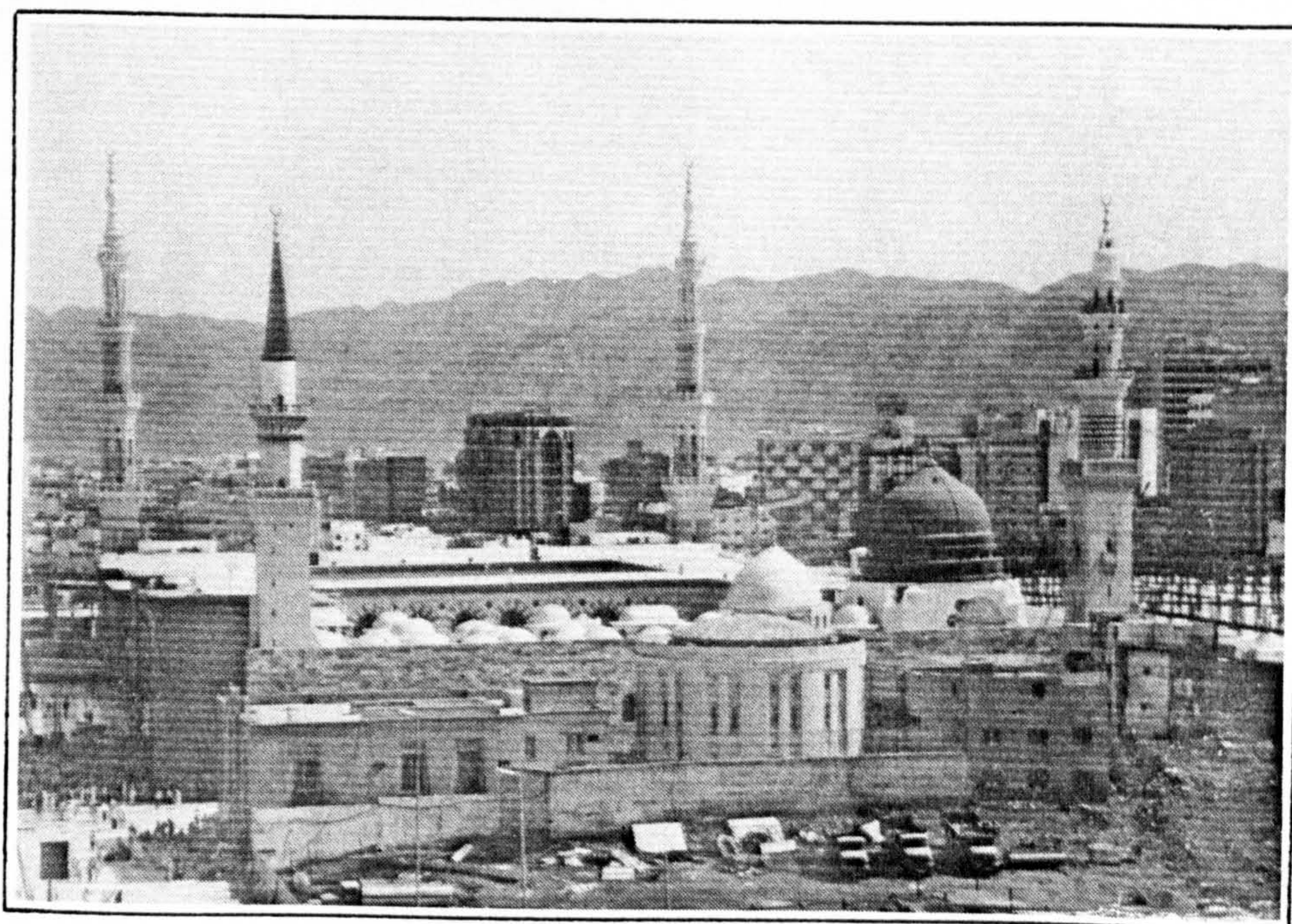


Fig. 4.4 Al-Medina, general view of the Haram Area: Looking North, 1987.

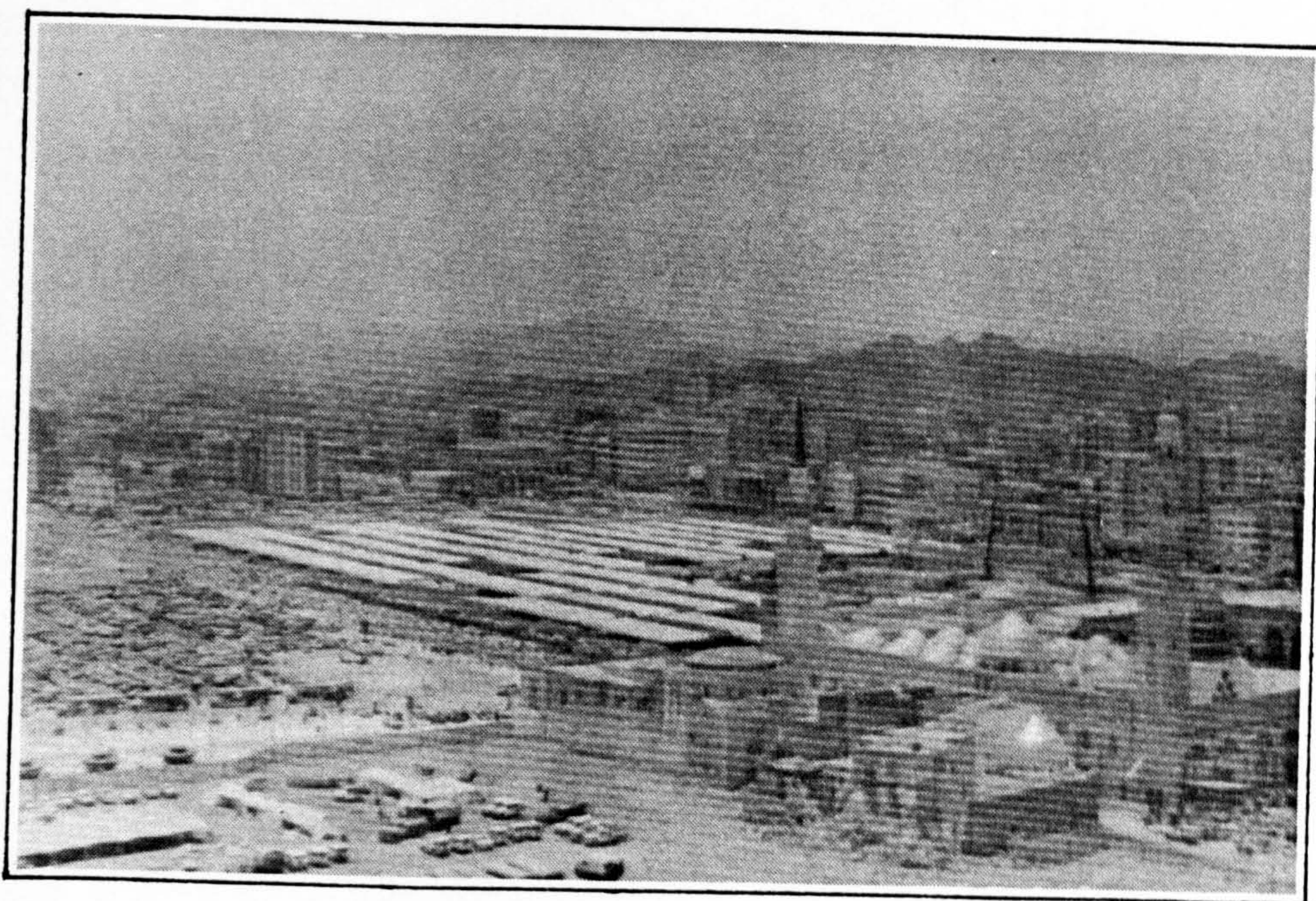


Fig. 4.5 Al-Medina, general view of the Haram Area: Looking North-west, 1987.



Fig. 4.6 Al-Medina, general view of the Haram Area: Looking North-west, 1987.

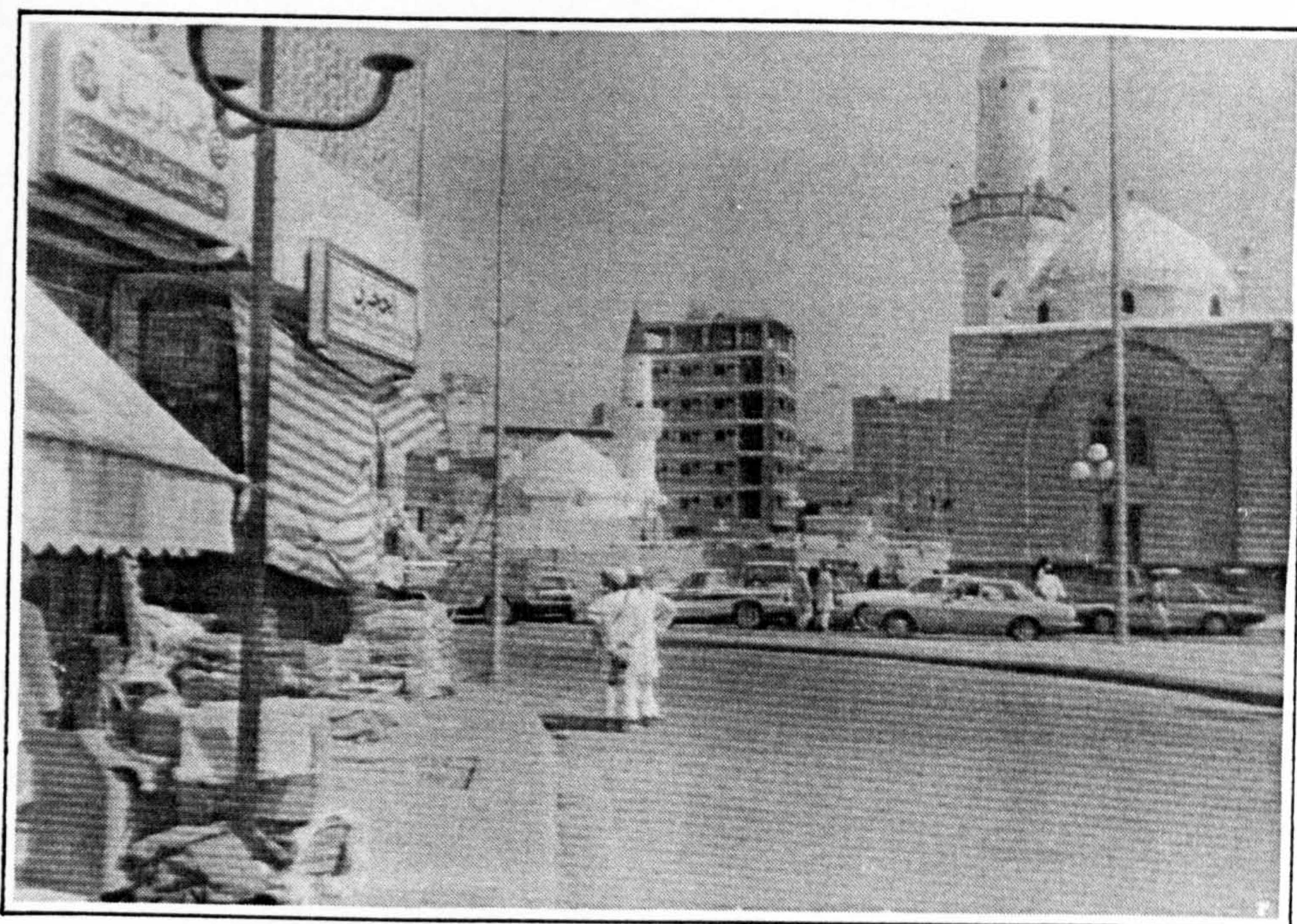


Fig. 4.7 Al-Medina, contradictions between modern developments and historical buildings in the Haram Area, 1987.



Fig. 4.8 Al-Medina, modern developments overshadow traditional buildings in the Haram Area, 1987.

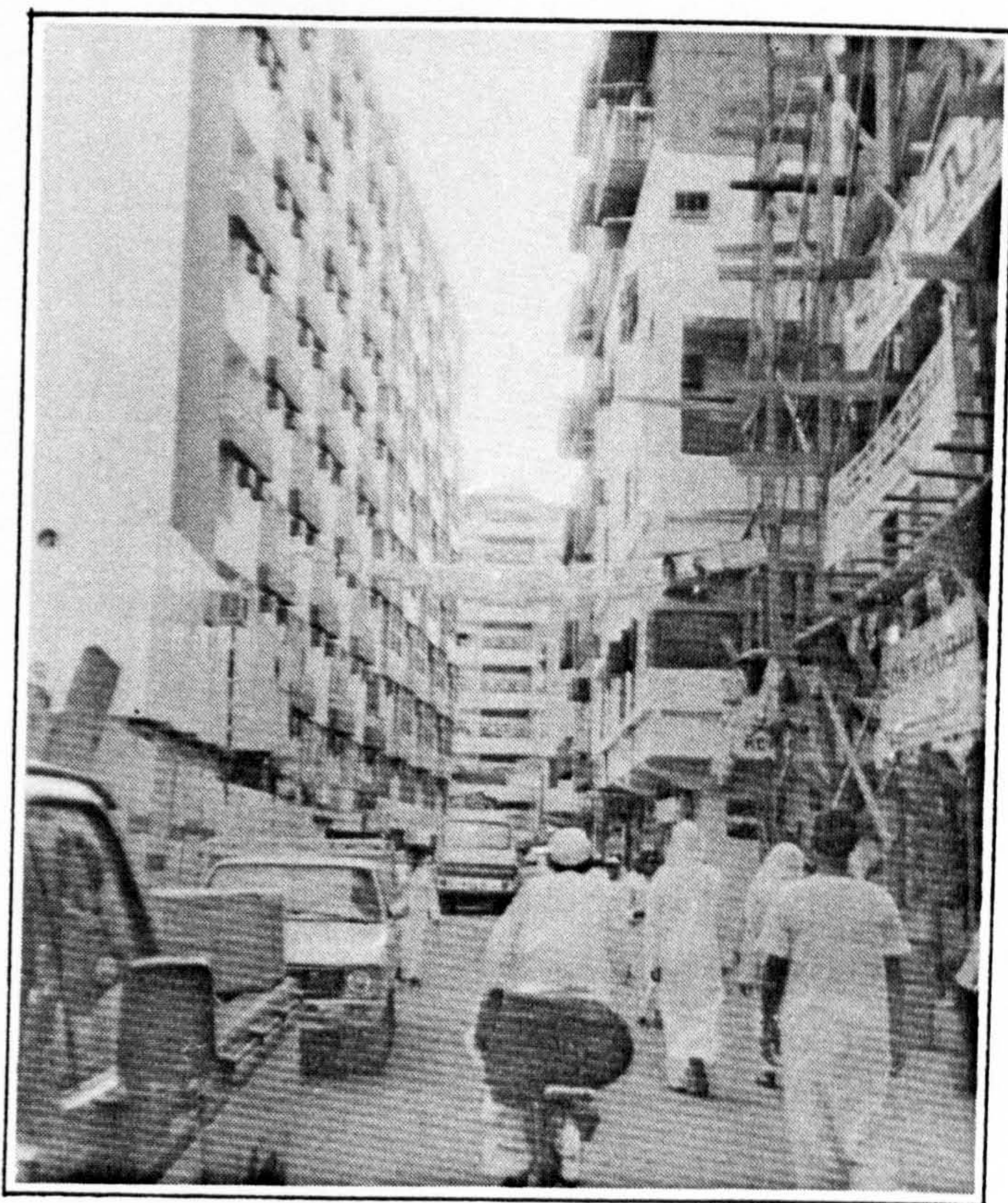


Fig. 4.9 Al-Medina, modern buildings along a new street, around 250 meters to the North-east of the Ḥaram, 1987.



Fig. 4.10 Al-Medina, modern buildings along Abū Thar Street, 100 meters to the East of the Ḥaram, 1987.

destruction of the integrity of the city (Plates 4.11 and 12).

Moreover, the traditional market atmosphere for which the Haram Area was well known, and which characterized the city for centuries, became a thing of the past. With the latest successive demolition of the old quarters adjacent to the Haram and the introduction of mixed retail activities, specialized aswāk have almost disappeared. Apart from a few markets for vegetables and meat the old practice of concentrating certain types of retailing establishments in one locality is no longer seen, typically the aswāk that catered for books, gold and jewels, incense and perfume, textiles and carpets.

The spirit of commercialism which has manifested in the construction of high-rise buildings in the Haram Area is obvious. It can also be seen in the free use of advertising materials. It seems that almost no spot in the city has been spared from such unsightly elements. Neon signs and advertisement boards are unimaginatively displayed on the top and across the facades of buildings, on pavements, and on the street lighting posts. Some of these have alternating coloured lights adding further distraction to the people passing by on their way to the Mosque (Plates 4.13 and 14).

The built environment in general no longer possesses^s the qualities that formerly gave the city its distinctive identity. Unless one is in the Haram or in a place where one can see it or some of the few remaining historical buildings in the area, one cannot tell that one is in the Prophet's city. Visitors do not find a significant difference between the place from which they have come, whether it is in the East or West, and the city of the

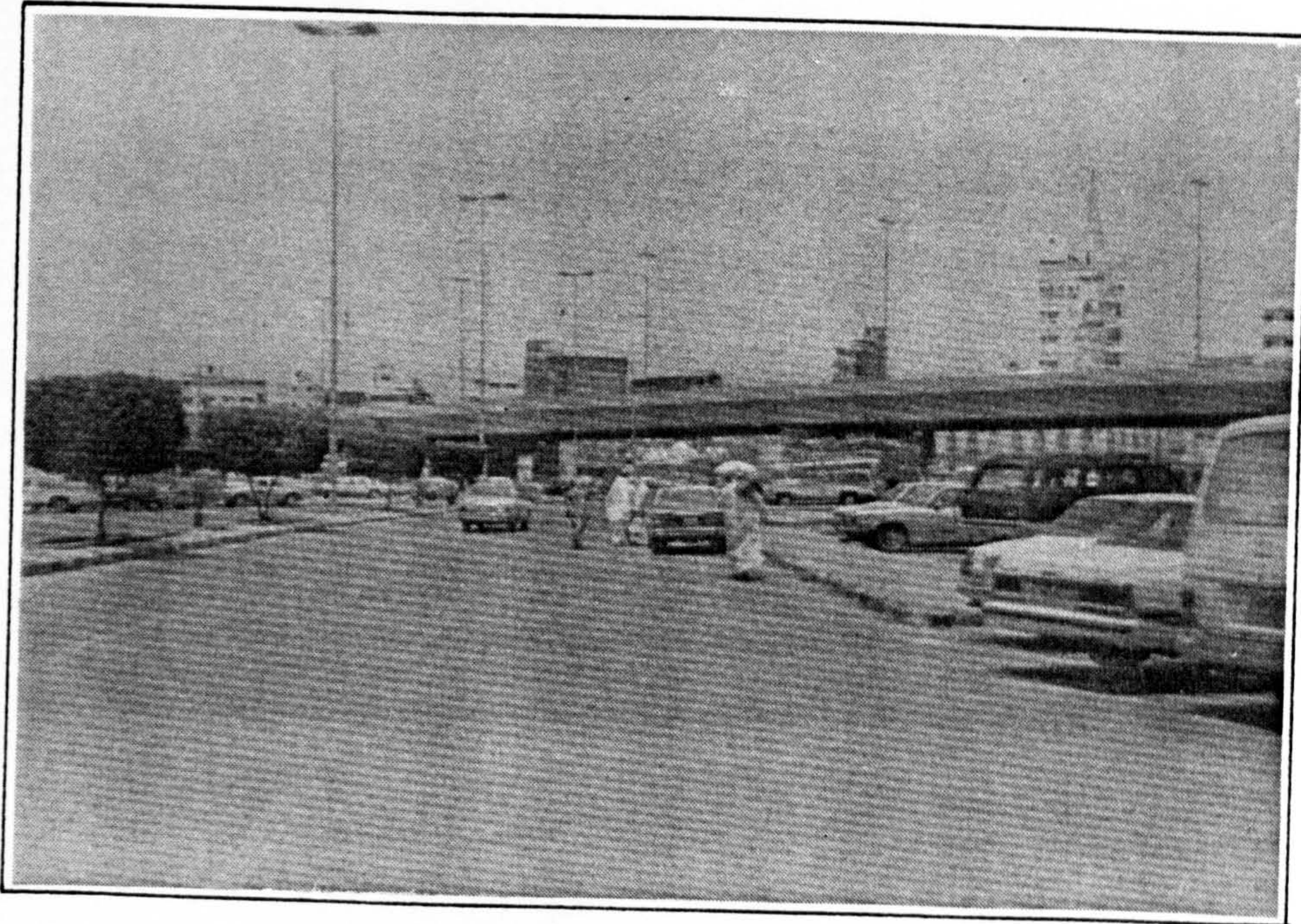


Fig. 4.11 Al-Medina, al-Şāfya Bridge, around 400 meters to the south of the Haram: looking North, 1987.

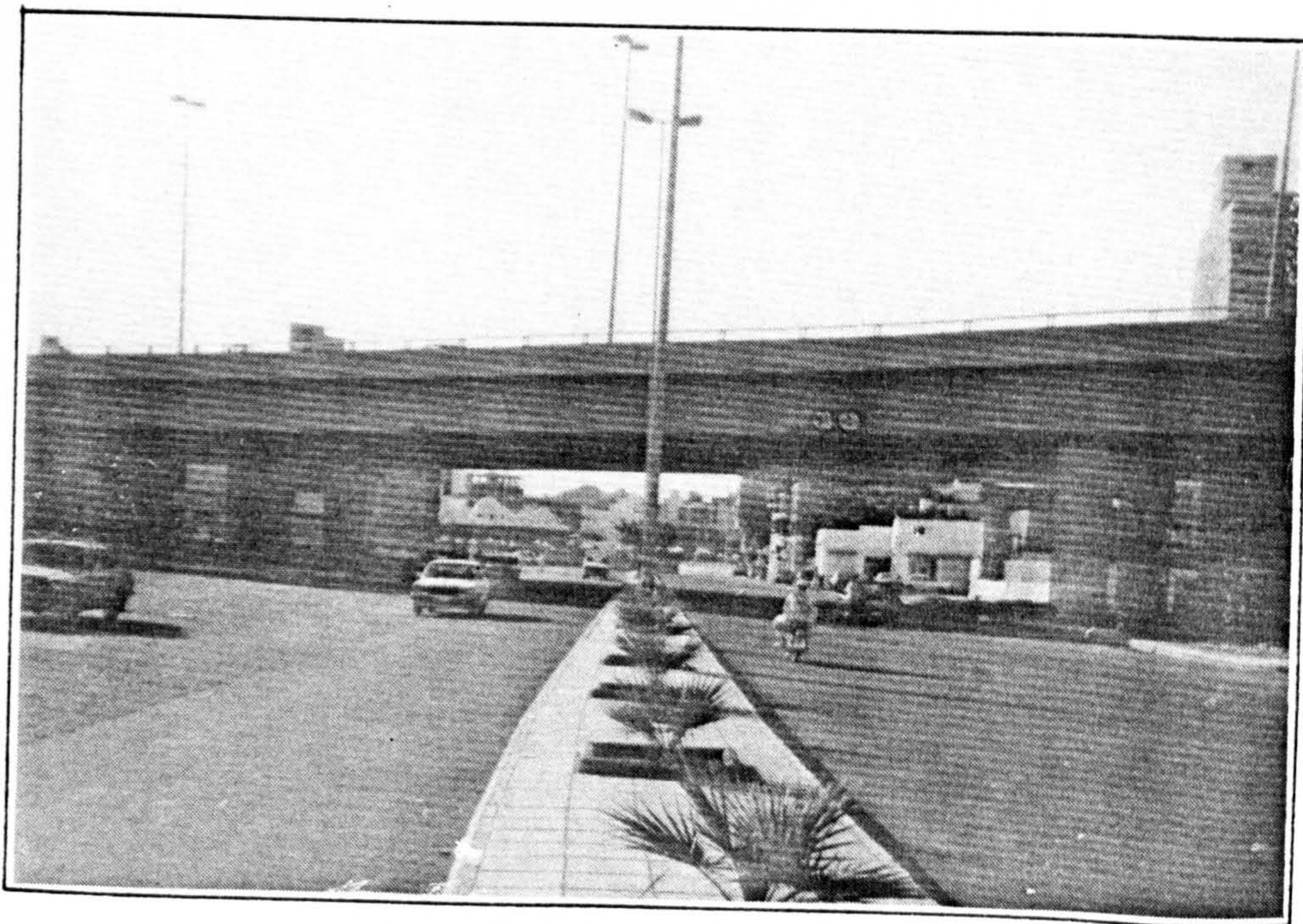


Fig. 4.12 Al-Medina, the Mosque of al-Ghamāma appears beneath al-Şāfya Bridge, 1987.

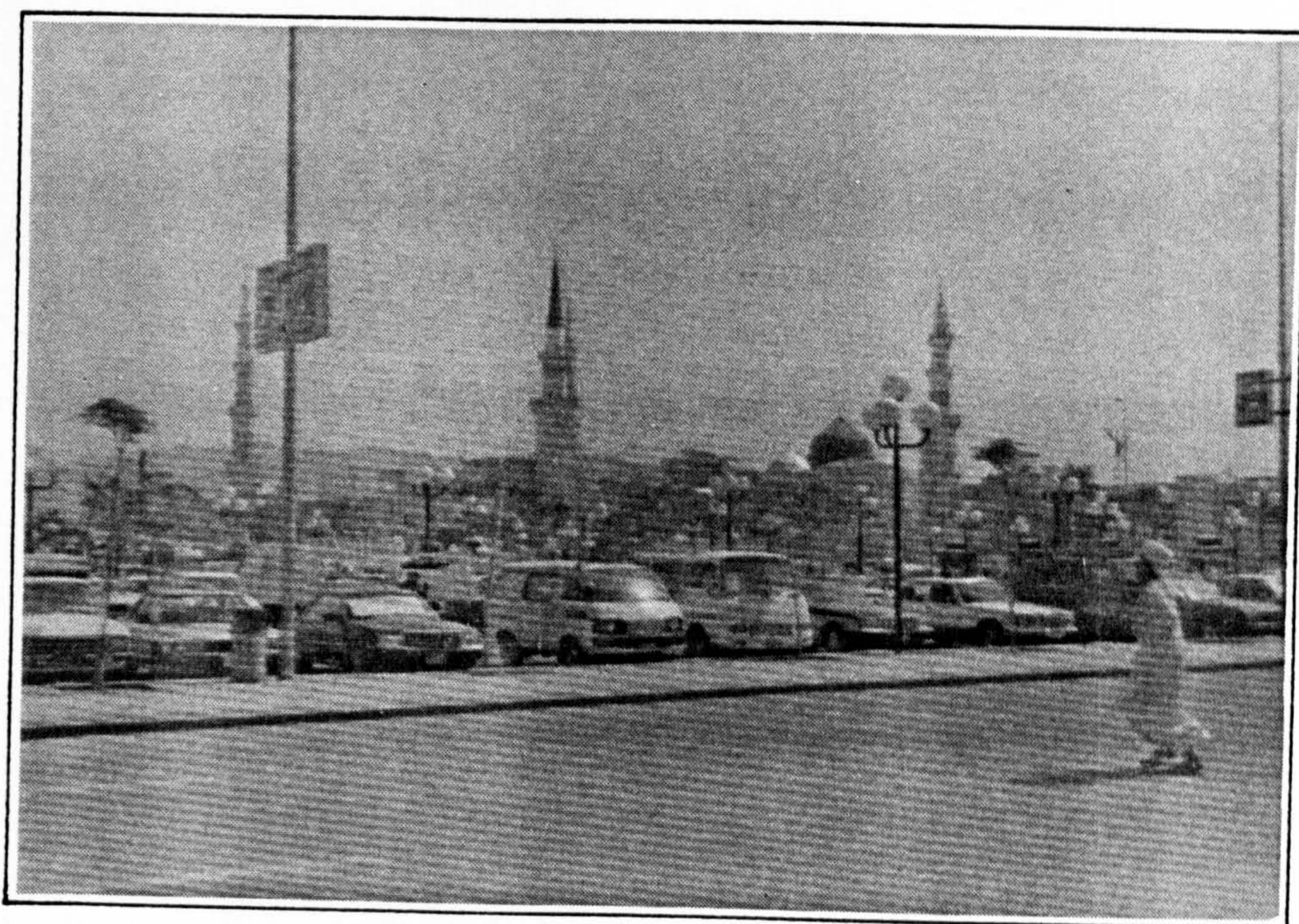


Fig. 4.13 Al-Medina, car-parking and advertising boards in front of the Haram, 1987.

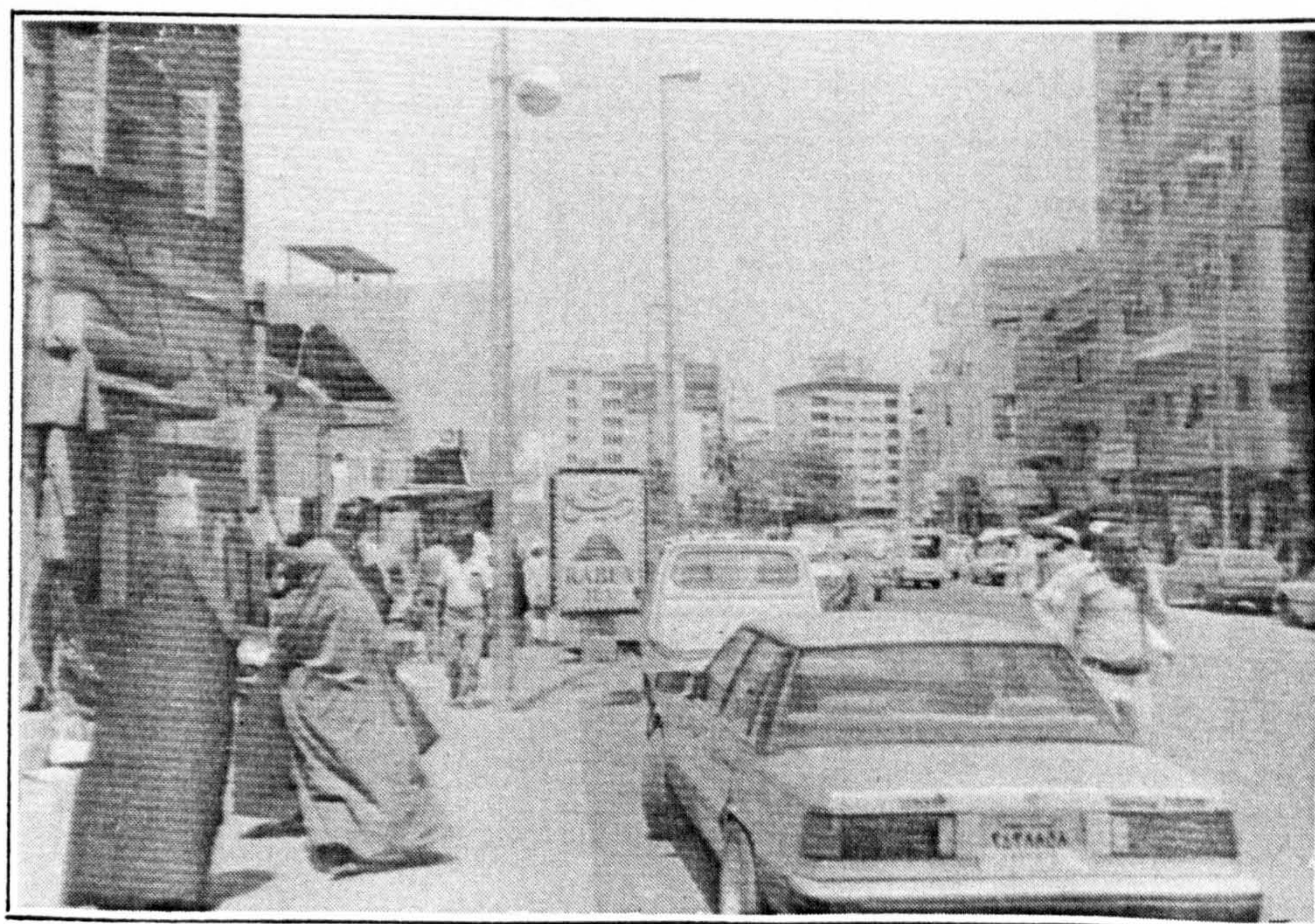


Fig. 4.14 Al-Medina, advertising materials along al-Saḥaymī Street, around 100 meters to the north of the Haram, 1987.

Prophet, to visit which and Mecca they have spent their lifetimes saving.

Finally, the extent of the effect of these recent developments on the city's spirituality can be demonstrated objectively only by examining the views of those most directly concerned about such environmental^{qualities}: inhabitants of and visitors to the area. This will be the main theme of Part Two of this study.

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PART TWO:

THE PUBLIC PERCEPTION OF CHANGE AND ITS EFFECT

ON THE CITY'S SPIRITUALITY

CHAPTER FIVE:

SURVEY METHODOLOGY

The belief guiding the surveys was that an investigation of the attitudes and aspirations of the people concerned in an urban setting is exceedingly important in understanding their needs and meeting their expectations. In the case of Al-Medina, as with other religious centres, such needs and requirements go beyond those which one expects from other cities, in that they include a spiritual dimension which is vital for inhabitants and visitors alike.

This chapter deals with the methodology of the residents' and visitors' surveys. It includes four main sections: the first defines the aims and the scope of the surveys; the second is devoted to the methods of data collection; the third describes the sampling techniques and methods of management that were employed, while the fourth section is assigned to the pre-testing stage of the questionnaires.

5.1 AIMS AND SCOPE OF THE SURVEYS

The aim of the surveys was to measure the attitudes and the aspirations of both the residents and visitors of Al-Medina towards the present environmental quality, and to determine how far it reflects the spiritual nature and the history of the city. At the same time the surveys were to ascertain their opinions about how to

recover a coherent and inspiring environmental character in the Holy City, in order to give the Islamic community the possibility of performing their religious duties in an appropriate and meaningful atmosphere.

The target population was the residents of and visitors to Al-Medina who are over seventeen years of age. Residents were defined as those who had been living in the city for more than six months. Visitors were those staying in the city for a shorter period, whether accompanying the visit to Al-Medina with performance of the ritual of pilgrimage or coming solely to visit the city. As such the primary sampling unit of the residents' survey was defined as any person over seventeen years of age living in Al-Medina, while that of visitors was any person over seventeen years of age on a visit to the city.

Two separate sets of questionnaires were designed for the surveys of residents and visitors, because of the differences in backgrounds, degree of familiarity with the city, and demand for services. Each questionnaire consisted of forty-three items. These dealt with a variety of issues relating to the study. For example, the questionnaires included items about the affect of the recent developments on the city's identity and whether these have contributed to the city spiritually or not. They also contain questions regarding high-rise buildings, bridges, pedestrian walk-ways and public transport in the city.

In addition to the items concerned with attitudes, both surveys included some background questions to obtain some basic information about the respondents and furnish the analysis of the results of the surveys. These were for instance, questions about

sex, age, level of education, type of accommodation and mode of transport of the respondents [1]. (Copies of the residents' and visitors' questionnaires are presented in appendices A and B respectively).

5.2 METHODS OF DATA COLLECTION

The data of both surveys were collected by using self-reported questionnaires handed to the subjects. This approach was adopted for several reasons. Firstly, a questionnaire is easier and less expensive to administer as compared with an interview. Secondly, it avoids potential interviewer bias. The personality of the interviewer and the way questions are asked may influence respondents' answers. Thirdly, it places less pressure on the respondent for an immediate answer. When the subjects are given ample time to answer attitude questions, they may consider each point more carefully rather than replying with the first thought that comes to mind, as may happen in an interview. Fourthly, in a questionnaire the respondents can be fully assured of their anonymity. In this study, confidentiality and anonymity were secured by instructing the respondents to seal up the answers in the envelopes which had been provided with the questionnaires, and not to write their names or anything else that might identify them. Finally, in a Saudi society, a female cannot be interviewed by a male who is not a member of her family [2].

A fixed-alternative (closed) question format was initially proposed to be used in these surveys. In this type of question,

the respondent is provided with some pre-determined alternative answers and asked to choose the one which best fits his or her standpoint. After the pre-test of the questionnaires was carried out it became apparent that it was desirable to follow up a few of the residents' questionnaire items with open-ended questions, in which the respondent is free to answer in his or her own words, in order to amplify the initial responses. (This point will be discussed in more detail in Section Four).

The fixed-alternative questions format was mainly used for its appropriateness to the nature of the study as against an open-ended one. A closed question should help to ensure that the answers are given in a frame of reference that is relevant to the purpose of the inquiry and in a form that is usable in the analysis. Sometimes the provision of alternative replies helps to make clear the meaning of the question. The closed question may require the respondents themselves to make a judgment about their attitudes, rather than leaving this up to the coder in the case of open-ended questions. Finally, fixed-alternative questions have the advantages of being "standardizable"; both questions and answers are presented in exactly the same wording and order to all respondents. They are simple to administer, quicker and relatively easier to analyze. Standardization also makes possible, comparability of the answers, which is not always the case otherwise [3].

5.3 SAMPLING TECHNIQUES AND METHODS OF MANAGEMENT

Different sampling techniques and methods of management were employed in the surveys of the residents and visitors. The samples of the two surveys represented two distinct populations. They differ from each other, as far as sampling was concerned, in terms of the data that were available and the practicable way in which the respondents could be approached. Thus, they will be dealt with in this section separately [4].

5.3.1 Sampling Techniques and Management of the Survey of Residents

According to the survey plan, the questionnaire for residents was intended to be carried out in the week starting on Dhū al-Hidja 18th, 1406/August 23rd, 1986. This date was proposed for two reasons. Firstly, the surveys of residents and visitors should be conducted at the same time, otherwise their results may not be comparable. Secondly, since the survey was planned to be carried out through schools, it was more convenient for the school authorities to help during the first week of the academic year than at a later time. But, as a result of the sudden postponement of the beginning of the new academic year of Saudi schools in that year for three weeks, the survey was conducted during the week starting on Muharam 9th, 1407/October 13th, 1986. Despite this delay, the residents' survey still took place within the time in which the visitors' survey was being carried out.

Before the main survey was carried out, a preliminary survey had been conducted. Both surveys were carried out through intermediate girls' school students. The students were the subject of the preliminary survey, in which they provide information about age and sex structure of their households (a copy of the preliminary survey form is presented in Appendix C). These data facilitated the sampling of the main survey. The students also acted as agents for collecting the questionnaire forms of the main survey from their schools, delivering them to the appropriate members of their households (the respondents), then returning them back to the schools where they were collected by the researcher. (These points will be discussed in more detail later on).

This approach was adopted for three reasons: firstly, because of the lack of any reliable census data or records of the residents of Al-Medina from which the required sample could be drawn, and because it was not feasible to numerate the potential respondents of the survey (the over seventeen years old residents of the city) for this purpose; secondly, getting access to females is very difficult in Saudi society. It is more acceptable, socially, to give a school-girl a questionnaire through her school, to be answered by her mother or sister, than to send it through a male member of the family; thirdly, this approach ensured that the questionnaire was completed by the right person and was returned.

The number of questionnaire forms that were distributed to the respondents of the main survey was 200. More than three times as many (660) of preliminary survey forms were distributed to the students, in order to provide enough bases for sampling of the main survey. To ensure that people in the different socio-economic

levels, sex, and age groups were adequately represented in the sample of the main survey, a multistage combination of probability and non-probability sampling techniques were employed in selecting the respondents.

In order to make sure that the different socio-economic groups of the city's population were sufficiently represented in the sample of the main survey, the city was divided into nineteen neighbourhoods. For the purpose of this study, a neighbourhood may be defined as an area served by an intermediate girls' school. The neighbourhoods were classified according to their predominant socio-economic characteristics into three categories: first-class, middle-class and second-class residential areas. A neighbourhood was then selected from each category. The selection was based on the typicality of the neighbourhoods to their respective socio-economical categories. The neighbourhoods which were served by the Seventh, the Third, and the Eighth Intermediate Girls' Schools were chosen to represent the first, the middle and the second class residential areas respectively (Figs. 5.1).

The proportions of the main survey sample allocated to respondents from each socio-economic class were based on their estimated corresponding ratio of the city's population. Thus, 30 per cent of the sample was assigned to respondents from the first-class; 55 per cent from the middle-class; and 15 per cent from the second-class neighbourhoods. The same proportions of the sample of the preliminary survey were allocated to school children of the selected neighbourhoods representing each socio-economic class (Table 5.1).

To ensure that a sufficient number of males and females in

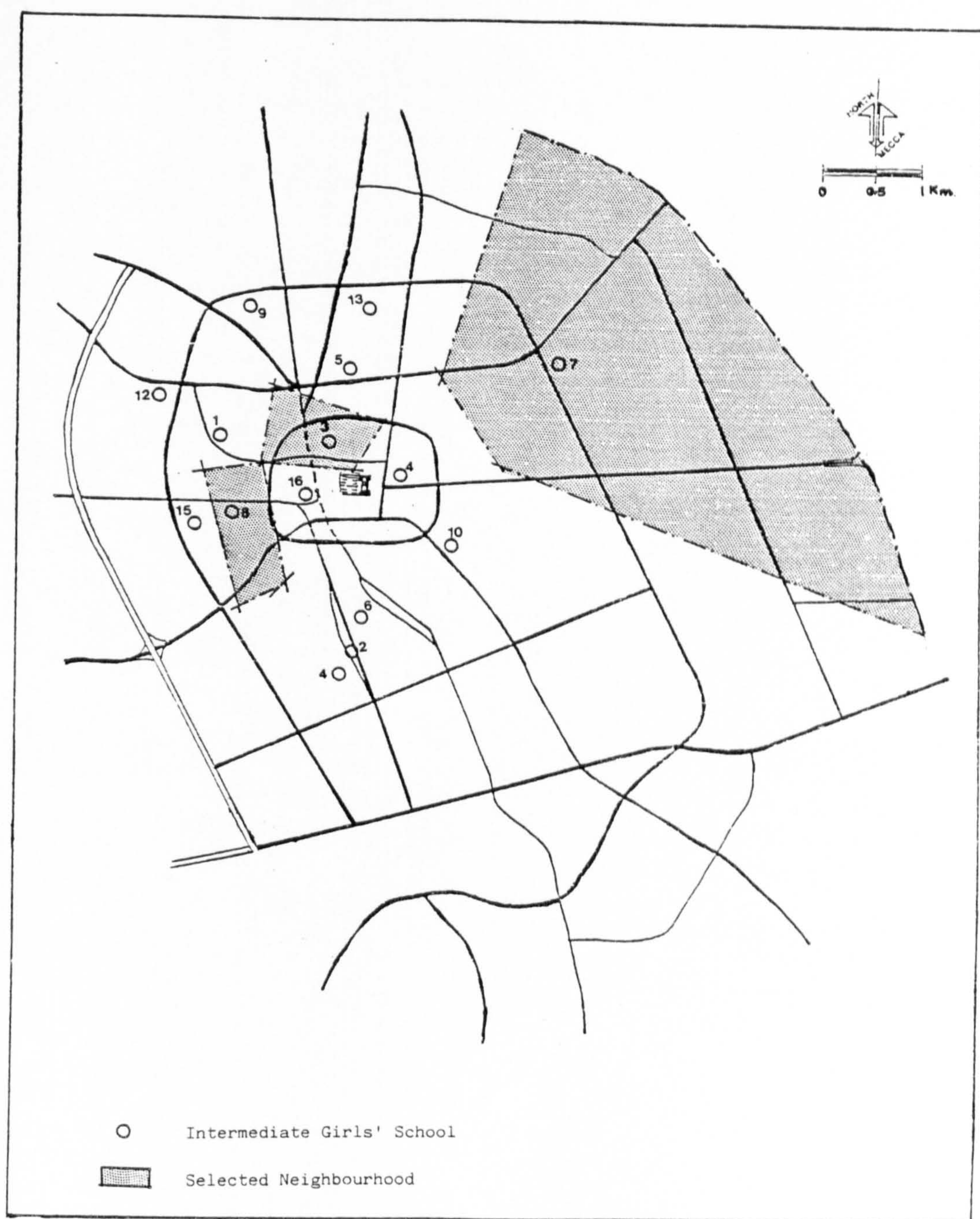


Fig. 5.1: The selected neighbourhoods for the survey of residents.

Table 5.1 Number of preliminary survey and main questionnaire forms distributed and completed by the respondents from the different socio-economic classes.

Socio-economic class	School	Number of preliminary survey forms distributed	Number of preliminary survey forms completed and returned	Number of main questionnaire forms distributed	Number of main questionnaire forms completed and returned
First-class	The Seventh	198	198	60	58
Middle-Class	The Third	363	363	110	99
Second-Class	The Eighth	99	99	30	27
TOTALS		660	660	200	184

the different age groups were included in the sample, the population of the three selected neighbourhoods was first stratified according to sex. It was proposed that 65.0 per cent of the sample would be males, although they constituted 51.5 per cent of the population of the city according to the sample survey which was carried out by the GACDAR (Group of Arab Consultants for Development and Reconstruction) in 1978 [5]. The over-representation of males in the sample was suggested because, before carrying out the survey, it was anticipated that men would differ amongst themselves far more than women, as far as the subject of this study is concerned, as men spend much more time outside the house than do women in Saudi society. They were expected to be more informed about changes in the environment. Thus, their attitudes are likely to be more heterogeneous than those of women in this respect. Kidder writes:

"In general terms, we can expect the greatest precision if the various strata are sampled proportionately to their relative variabilities with respect to the characteristics under study rather than proportionately to their relative size in the population" [6].

The males and females were then subdivided according to age, into six age groups: over 17 to 27; over 27 up to 37; over 37 up to 47; over 47 up to 57; over 57 up to 67; and over 67 years old. Twenty per cent of each sample of males and females were chosen from each of the first three age groups; 14 per cent were chosen from the 47 to 57 age group; and 13 per cent were chosen from each of the last two age groups, to take part in the main survey.

Again, the samples include a larger proportion of respondents who were in the last three age groups than their actual proportion of the city population. According to the 1978 survey of

the GACDAR, about 33.4 per cent of the over 17 years old population of the city were between 17 and 27 years old; 23.8 per cent were from the 27 to 37; 17.8 per cent were 37 to 47; 11.0 per cent were 47 to 57; 9.1 per cent were 57 to 67; and 4.9 per cent were over 67 years old [7].

Over-representation of these age groups was to ensure that they were adequately sampled. Of course, before the analysis of the result of the survey, the responses of men and women in the different age groups would be appropriately weighted in order to match their actual proportion in the population of the city.

After this, a simple random sample was taken from each age group of men and women, in each neighbourhood, according to the required percentages (the way in which these sub-samples were taken will be discussed later on). The sub-samples were then joined to form the desired sample of the population of the three selected neighbourhoods which are intended to be representative of the entire population of the city.

Now we turn to how these were put into practice in the fieldwork. After the arrangements had been made with the schools' administration of the three selected neighbourhoods, the preliminary survey forms were sent to them. Each school received its quota of the forms (see Table 5.1) and detailed instructions for the distribution a week before the date when the main survey was carried out. The forms were distributed on Saturday 9th of Muharam, 1407/13th of September, 1986 by the schools' teachers, who explained the instructions for filling them in to the students. Students completed the forms, and they were collected on the same day. After this the selection of individuals who had participated in the

main survey from each neighbourhood was carried out in the following way:

- a) The preliminary survey forms that had been completed by students of each school were put together and separated from those of the other ones;
- b) in order to give members of each student's household an equal chance of being included in the sample of the main survey, the preliminary survey forms were checked to make sure that no more than one form belonged to members of an individual household. In other words, if a student indicated in the preliminary survey form that she had another member(s) of her household in the same school, form(s) of that member(s) would be put aside and excluded from the forms from which the sample was taken;
- c) then, forms of each school were mixed thoroughly and arranged in one batch, one form on top of another;
- d) after that each second form in the batch was drawn, starting from a random number within the sampling interval (in this case the first top form or the second);
- e) after drawing each student's form, a member of the household of that student was then selected and marked with a red circle on the form itself and kept aside to be included in the sample of the main survey;
- f) steps (d) and (e) were repeated for each batch until the desired number of cases of men and women in the different age groups from each neighbourhood had been selected.

On the next day, the main questionnaire forms, envelopes,

and the selected preliminary survey forms were delivered back to the schools, and they were distributed to the student whose member of their household had been selected to take part in the main survey. Each student received her preliminary survey form and an envelope, which contained a copy of the main questionnaire. Then, each one was asked to hand the envelope to the member of her family whose relationship to her had been marked in the preliminary survey form with a red circle. They were also requested to return the main questionnaire forms to the school three days later, after they had been completed and sealed up by the respondents in the envelopes provided. The feeling of privacy and the anonymity of the respondents was further ensured by asking the students to keep the preliminary survey forms. Finally, as the result of the co-operation of the schools' administration, students, and above all respondents, 92 per cent (184 forms) of the main questionnaire forms were completed and returned back to the schools on time (Table 5.1).

5.3.2 Sampling Techniques and Management of the Survey of Visitors

The visitors' survey was conducted during the pilgrimage season in order to ensure that sufficient numbers of visitors were available in the city from different parts of the world at one time. It was carried out in two stages: before the pilgrimage and after it. The first stage started from Dhū al-Ḳi'dah 10th, 1406/ July 17th, 1986 and ended in Dhū al-Ḥijja 2nd, 1406/August 7th, 1986. The second stage started on Dhū al-Ḥijja 18th, 1406/August 23rd, 1986 and ended on Muḥaram 13th, 1407/ September 17th, 1986 .

As stated in Chapter One, during the actual days of the ḥaḍj, between the eighth and the twelfth of Dhū al-Ḥiḍja pilgrims stay in Mecca and the other holy sites around it. However, most of the pilgrims go to Mecca at an earlier time in order to perform some prayers in the Great Mosque of Mecca and to prepare for the ḥaḍj. They also stay there a few days after the ḥaḍj. As shown in Chapter Four, the people who visit Al-Medina before the performance of the pilgrimage start to go to Mecca in large numbers from the beginning of the month of Dhū al-Ḥiḍja. Those who visit Al-Medina after observing the ḥaḍj start to come to Al-Medina from the middle of the same month.

Another reason for carrying out the survey in two stages was that in the last few years, because of the crowds in Al-Medina during the pilgrimage season, overseas pilgrims who wished to visit Al-Medina were allowed to do so only once, either before performing the ḥaḍj, or after it. Pilgrims from one country usually divided into groups, some visiting the city before the pilgrimage, and some visiting it afterwards. In some cases the whole band of pilgrims from one country visited the city either before or after the pilgrimage: for example, pilgrims from Turkey and Libya visited the city after the ḥaḍj in the year in which the survey was carried out.

Two hundred and fifty questionnaire forms were distributed. About 60 per cent of this number were distributed before the ḥaḍj, the rest after it. The total number that were completed and returned back was 205, representing attitudes of visitors from 27 countries. The survey was carried out in five languages, namely Arabic, English, Turkish, Urdu and Hausa. Different sampling techniques were employed in selecting the

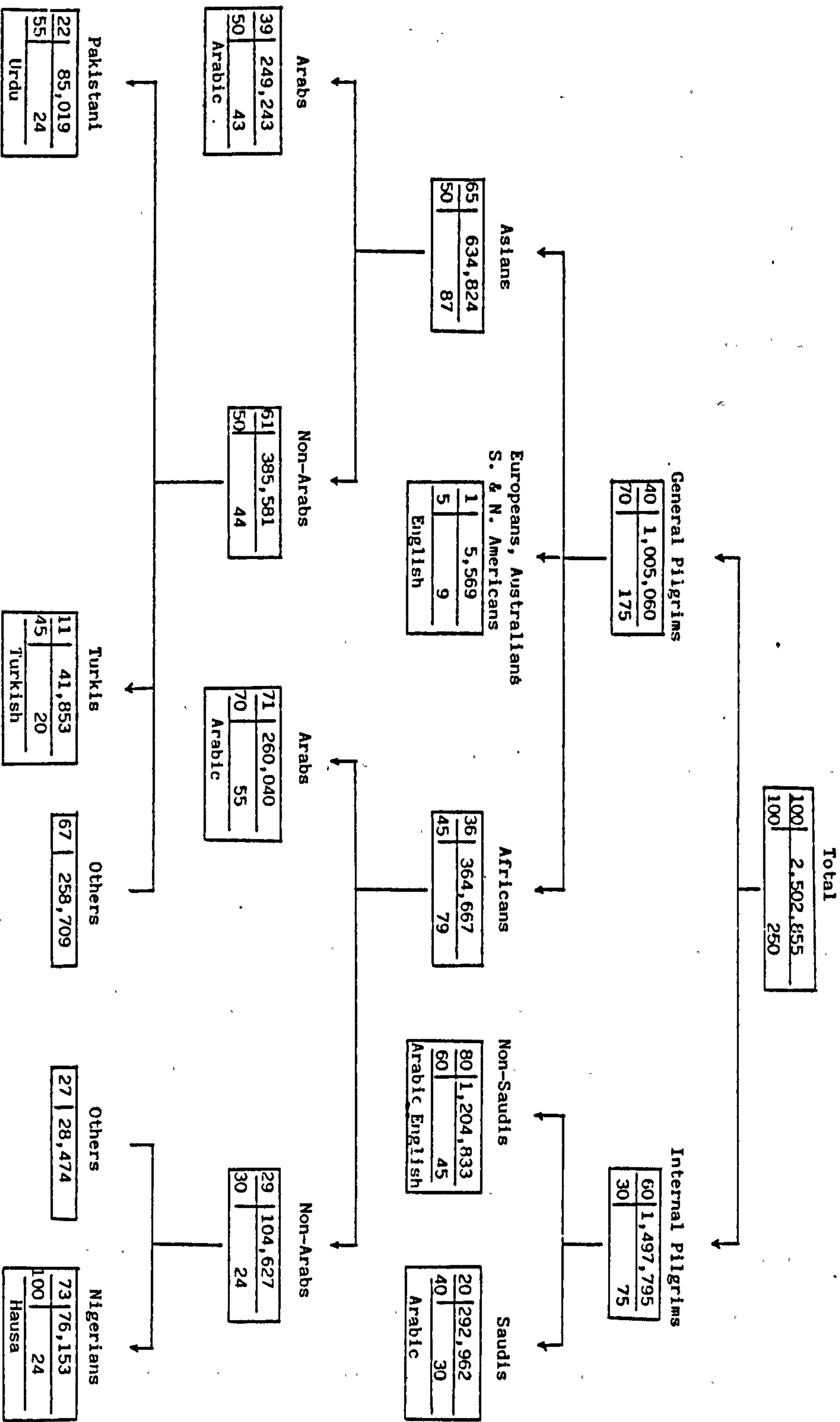
respondents.

Because of the enormous number of countries from which the visitors come, the diversity of their languages, and their numbers, it was not practicable to include respondents from each individual country of origin of visitors in the sample of the survey. In the year in which the survey was conducted the people who performed the ritual of pilgrimage came from more than 123 countries world-wide. The number of overseas pilgrims ranged from one pilgrim, from Mexico, to 152,149, from Iran [8]. (It should be mentioned here, as indicated earlier, that the pilgrimage statistics are used in this section to give a general indication about the issues in question when their equivalent in regards to visitors to Al-Medina are not available).

Thus for sampling purposes the visitors to Al-Medina were divided into two main strata, internal visitors (from within the boundaries of Saudi Arabia), and external visitors (from outside the country). The internal visitors are classified into two categories; Saudi citizens and non-Saudi. Each category was further stratified into two sub-categories; males and females. Then a sample was taken from each (for number of pilgrims, size and proportion of the sub-sample, and languages in which the survey was carried out for each group, see Fig. 5.2).

External visitors were arranged in three divisions: Asians; Africans; and Europeans, South and North Americans, and Australians. The third division was divided into two groups, males and females, then a sample was taken from each group, while the second division was classified into two subdivisions, Arabs and non-Arabs. The Nigerians were selected to represent the non-Arabs

Fig.5.2. Sampling of the visitors' survey



Key:

B	A
D	C
E	

- A : Number of pilgrims on 1403 A.H. (1963 A.D.) in each group.
- B : Percentage of pilgrims in each group.
- C : Number of respondents from each group.
- D : Percentage of respondents from each group.
- E : Language of the questionnaire.

Notes:

- Seventy five per cent of the sample was allocated to male respondents, the rest to females.
- Proportion of the sample assigned to respondent in each group was based on the expected variability in their attitudes with respect to the study subject.
- Pilgrims Statistics from 1403 A.H. (1963 A.D.) were used because they were the latest available ones at the time of the design of the survey. They were obtained from: The Hajj Research Centre, Mecca.

of Africa. They constituted 73 per cent of the total number of the non-Arab pilgrims from Africa in 1983 (see Fig. 5.2). Both these sub-divisions were further stratified into males and females, and a sample was taken from each.

The Asians were also divided into two groups: Arabs and non-Arabs. The former were divided into males and females, and a sample was taken from each division. The visitors from Pakistan, and Turkey were chosen to represent the non-Arabs from the Asian content. They formed 33 per cent of the total number of the non-Arab pilgrims from Asia in 1983. The visitors from these countries were stratified into males and females, then a sample was taken from each.

All the sub-samples were then joined to form the desired sample of the visitors' survey.

Visitors from the same country usually stayed in several buildings on their own and were looked after in Al-Medina by one or several adilā (plural dalīl, visitors' guide) and their Pilgrimage Missions. They stayed in hotels, guest houses or apartment buildings. Before carrying out the survey, lists of addresses of buildings occupied by visitors from the countries concerned were obtained from their Pilgrimage Missions, or adilā. Then a few buildings from those occupied by visitors from each country were selected at random from the lists (random sampling from a list will be described later on). The number of the selected buildings depended upon the number of respondents required to take part in the questionnaire, and the sizes of the buildings. After that, the desired number of respondents were chosen from the selected buildings.

Two sampling techniques were employed for choosing respondents from the selected buildings. Firstly, systematic sampling from a list: this was employed when the selected building had records for their occupants, as was the case with hotels, guest houses and some apartment buildings. Records usually register name, sex, nationality, room number, and date on which the occupant arrived in the city.

Before sampling, the records had been examined to make sure that all the occupants listed were eligible to take part in the survey. Also, the records were not ordered in such a way that sampling at intervals might bias the results, thus giving certain cases a greater probability of selection. A name was then chosen from the records in a constant interval until the desired number of men and women were chosen. Sampling interval, called "K", may be obtained by dividing the number of the eligible cases on the records by the size of the required sample. For example, if the records showed 100 occupants, 80 men and 20 women, and a sample of 6 men and 2 women was required, "K" for men would be $80/6$, that is 13.33, approximately 13; "K" for women would be $20/2$, that is 10. In this case, every thirteenth man and tenth woman on the lists would be selected for inclusion in the sample, starting from a random number within the sampling interval [9].

The second technique was two-stage sampling of a building: this technique was used when records were not available, or one could not get access to them. In the first stage, the occupied rooms in the selected building were listed on paper. Then a room was chosen from the list at a regular interval in the same way as for systematic sampling, till the required number of rooms had been

chosen, the required number of rooms being identical to the desired number of respondents. In the second stage, if there was more than one person living in a selected room, a respondent would be chosen at random [10].

After the respondents had been chosen, questionnaire forms and envelopes were handed to them directly and they were asked to return them the next day after they had been completed: to the receptionist in the case of hotels or guest houses, or to the person in charge of the building in the cases where receptionists were not available. When respondents were not in their rooms, receptionists or the persons in charge of the buildings were asked to distribute and collect them from respondents.

5.4. PRE-TESTING THE QUESTIONNAIRES

The aim of pre-testing is to see how the questionnaire works and whether changes are necessary before the start of the full-scale study. It provides a means of identifying and solving unforeseen problems in the administration of the questionnaire, such as lack of adequate instructions for answering questions, phrasing and sequence of questions. It may also indicate the need for additional questions or the elimination of others [11].

Before the start of the full-scale study, both visitors' and residents' questionnaires were pre-tested. Fifteen visitors and fifteen residents of Al-Medina, similar in characteristics to those who participated in the final study, were asked to answer the questionnaire. Respondents from different age groups, sex,

educational level and cultural background were chosen for this purpose. The contents of the questionnaires were discussed with them after they had completed the questionnaires. They were asked what each item meant to them, what difficulties were experienced in answering them and any further ideas which had not been brought out in the questionnaires.

The pre-test of the residents' questionnaire suggested few changes. Apart from following questions 29, 30 and 31 with 'Why' and securing adequate space for writing, no changes took place (see the questionnaire, in Appendix A). These additions resulted from the discussion of the questionnaire content with the respondents. The discussions pointed out that almost every respondent has a different point of view from the others regarding the justification of agreement or disagreement of conserving each of the three areas in question.

The pre-test of the visitors' questionnaire, however, indicated that respondents who happened to receive and fill in the questionnaire on the actual day of their arrival or on the day after should be instructed not to answer question number 33, which dealt with the number of Daily Prayers that were observed with the imām (the one who leads the congregational prayer) of the Haram. Otherwise, in the analysis stage, one cannot distinguish those who were in Al-Medina on the day before that on which the questionnaire was completed and did not observe any prayer with imām of the Haram, from those who were not there (see the questionnaire, in Appendix B). This distinction is a very crucial issue for the assessment of both the present and the future demand for prayer places in the Haram.

The pre-test also implied a rephrasing of question number 36, which used to read:

36. Where are you from?

"Please write the country here" _____

It was suggested that it should be changed to:

36. What is your nationality?

In addition, it became apparent that it would be desirable to follow this question with two more, in order to obtain more precise information about the background of the respondents. These are:

37. Where do you live?

"State the country" _____

38. If you live in Saudi Arabia, in which city do you live?

NOTES AND REFERENCES

1. For questionnaire design, see for example:

- Kidder, Louise H., Selling Wrightsman & Koak's, Research Methods in Social Relations, Holt-Saunders, 1981, Chapters 4 and 8.
- Riley, Matilda White, Sociological Research II Exercises and Manual, Harcourt Brace & World Inc., New York, Chicago, San Francisco and Atlanta, 1963, Section One.
- Panten, Mildred, Surveys, Polls and Samples: Practical Procedures, Harper Brothers, Publishers, New York 1950, Chapters VI, XL, XIII.
- Payne, Stanley L., The Art of Asking Questions, Princeton University Press, Princeton, New Jersey, 1973.

- Moser, C.A. and Kalton, G., Survey Method in Social Investigation. Heinemann Educational Books Limited, London, 1972, Chapter 13.
 - Oppenheim, A.N. Questionnaire Design and Attitude Measurement, Heinemann, London, 1960.
2. For comparison of the advantages and disadvantages of the various survey methods, see Kidder, Louise H., op. cit., pp. 148-155.
 3. See Selltiz Claire, et al., Research Methods in Social Relations, Methuen & Co. Ltd., 1966, pp. 255-263.
 4. For sampling techniques see for example:
 - Kidder, op. cit., particularly Appendix (An Introduction to sampling).
 - Riley, op. cit., Section Five.
 5. GACDAR (Group of Arab Consultants for Development and Reconstruction), Project No. 202, Ministry of Municipal and Rural Affairs, Riyadh, 1980, Report No. 5, VI, p.36.
 6. Kidder, op. cit., p. 435.
 7. These percentages are approximate as the classification of age groups which was followed in the survey of GACDAR was different from that used in this study. They were calculated by the researcher. See GACDAR, op cit., Report No. 5, V.I, p.33.
 8. The Directorate General of Passports, Minstry of Interior, Pilgrims Statistics for 1406 A.H. 1986 A.C., Riyadh, 1986.
 9. See Riley, op. cit., p.172.
 10. Ibid., p.172.
 11. See Kidder, op. cit., p.162 and 163.

CHAPTER SIX:

Analysis of the Survey of Residents

This chapter is concerned with the analysis of the survey of residents. The analysis is mainly based on simple statistical techniques such as frequency distributions and cross-tabulations. The Statistical Package for Social Sciences (SPSS-X) was used.

The chapter contains two main sections: the first describes the data and identifies some of the sampling problems and the way they were dealt with and the second deals with the findings of the survey in detail.

6.1. THE DATA

The sample survey included 184 respondents chosen on a stratified random sampling basis from the households' members of the intermediate girls' school students who participated in the preliminary survey, as explained in the previous chapter. Relatively more respondents were intentionally chosen from specific groups than their proportion in the city population, i.e. men and old people were over-represented in the sample(see section 5.3.1.).

Therefore, before analysing the results of the survey, the data were weighted by sex and age of the respondents in order to match their respective proportions in the population of the city according to the survey which was carried out by GACDAR (Group of Arab Consultants for Development and Reconstruction) in 1978. The

weight command that is available in the SPSS-X computer package was employed for this purpose.

In addition it was expected before carrying out the survey that most of the respondents would come from large households as a result of the sampling method which was used for reasons discussed earlier. The selection of individuals who took part in the Main Survey was based on the findings of the Preliminary Survey in which intermediate girls' school students provided information about age and sex of each member of their households. In other words, the sample was taken randomly from residents who had members of their households in an intermediate girls' school. The sizes of these households are expected to be large, since it is less likely for newly married couples or elderly people who are not part of an extended family to have a female member of their household in the age range of the intermediate school.

This presumption is confirmed by the data, presented in Table D40.* It reveals that only 1.9 per cent of the respondents came from households consisting of two members; 11.9 per cent came from three to five member households; 36.6 per cent came from households of six to eight persons and 49.6 per cent came from households consisting of nine members or more. Also, from the calculations presented in Appendix H, the average household size (the arithmetic mean) of the sample was 8.04 persons, while the average household size in Al-Medina was 6.25 persons in 1987 [1].

* In this chapter, the letters in the tables' numbers refer to the appendices' numbers, while the figures refer to the tables' numbers.

Unfortunately, the demographic representativeness of the sample cannot be checked by means of comparison with any previous survey because of the lack of appropriate data. However, apart from the over-representation of respondents who came from large households, the sampling method and the management techniques which were employed do not suggest that those who participated in the survey were in any manner untypical of the population of Al-Medina at large.

Over-representation of respondents who were members of large households raises two important questions; did the other demographic characteristics of those who came from small households differ from those who were members of large ones? Was there any variation between their attitudes as far as the aim of this survey is concerned?

Examination of the relationships between household size and the other demographic characteristics of the respondents indicates that it is unlikely that they were related. For example, cross-tabulation of household size and the total household income of the respondents reveals that it is improbable that the two variables were associated. As shown in Table E2, the total monthly income of 76.0 per cent of the small households (less than six members), as compared with 71.5 per cent of the large ones (six members or more), is below 5000 SR (Saudi Ryales). (In this example household income is divided into two groups: below 5000 SR and 5000 SR or more).

Similarly, the type of house in which the respondents lived is unlikely to be related to the size of their household. The data presented in Table E2 demonstrates that 21.9 per cent of small households, in contrast to 21.2 per cent of large ones, lived in

villas; 54.9 per cent of small households, as compared with 42.8 per cent of large ones, resided in flats; and 23.2 per cent of the small households, in contrast to 35.9 per cent of the large ones, dwelt in other types of house.

Also, members of small households did not differ much from those of the large ones in terms of educational levels. As can be seen from Table E3, 49.7 per cent of the respondents who were members of small households, as compared with 34.4 per cent of the members of large households, did not complete primary school education; 32.4 per cent of the members of small households, in contrast to 43.1 per cent of the members of large households, held a primary or intermediate schools' certificate or their equivalent; and 17.8 per cent of the members of small households, compared with 22.6 per cent of the members of large ones, completed at least high-school education or its equivalent.

Again, it is unlikely that the household size of the respondents influenced their attitudes towards the environment. For instance, cross-tabulation of the household size of the respondents and their responses to the statement, "the recent developments in the central area of Al-Medina have not contributed much to the spiritual nature of the city", indicates that 75.3 per cent of the members of small households agreed with the statement, compared with 77.4 per cent of those members of large households who did so (see Table E4).

It is clear then that not only did the backgrounds of the respondents who were members of small households differ little from those who were members of large ones, but also their attitudes were unlikely to be affected by their household sizes. So, as far as

the aim of this survey is concerned, over-representation of respondents who came from large households had an inconsiderable effect which was likely to have influenced the findings of the questionnaire.

6.2 FINDINGS

The results will be covered in two parts. The first will discuss in detail the results of the analysis of all the questionnaire's items. The second will concentrate on the attitudinal differences among the respondents due to the variation in their background.

6.2.1. Detailed Analysis

For the analysis, the questions involved in the survey can be classified, according to their objectives, into two categories. The first category contains factual questions. These deal with two types of data. The first type is concerned with the demographic characteristics of the respondents, such as age, sex, household income and car ownership; the second type deals with some behavioural aspects of the respondents, for example, the number of Friday and Daily prayers which are usually observed by the residents in the Haram, and how they generally get there. The second category contains attitude questions, which are the main theme of the survey. Because the first category of questions furnishes the

basis for analysing of the second category, it will be dealt with first in this section.

As mentioned earlier, the analysis is mainly based on the frequency distributions, the frequency with which each value of the variable occurs; and cross-tabulations in order to examine the association (relationship or correlation) between the variables.

The first page of the questionnaire booklet contained an introductory letter. In addition to the instructions for filling in the questionnaire, it explained the aim of the survey, and why it was sent by way of the school students. Also, it emphasized the anonymity and confidentiality of the answers. After that, the questions started with one regarding the length of time the respondent had been living in Al-Medina.

In response, only three individuals (1.7 per cent of the sample) indicated that they had been living in Al-Medina for a period of less than one year; 3.7 per cent had been living in the city for a period ranging from one year up to six years; 14.0 per cent had been living in the city for a period between six and sixteen years; and the majority of the respondents (80.5 per cent) had been living there for more than sixteen years (Table D1). This question was followed by two pairs of questions.

The first pair was designed to elicit the differences between the numbers of Daily prayers which are usually observed by the residents of Al-Medina in the Haram during the off-season and the season of pilgrimage. Patterns of the responses reveal that the residents performed Daily prayers in the Haram less frequently in the season of pilgrimage than in the off-season. As shown in Tables D2 and D4, 18.5 per cent of the respondents observed at least

three prayers in the Haram every day in the off-season of pilgrimage, while 13.1 per cent observed the same range of prayers in the season of pilgrimage; 14.2 per cent performed one or two prayers in the mosque in the off-season of pilgrimage every day, compared with 19.9 per cent of the respondents who attended the same number of prayers in the season of pilgrimage; 14.5 per cent observed two to six prayers every week during the off-season, in contrast to 10.7 per cent of the respondents who performed the same number of prayers in the season of pilgrimage; 18.7 per cent observed two to seven prayers every month in the off-season, compared with 12.5 per cent of the respondents who observed the same numbers of prayers in the season of pilgrimage; and 34.0 per cent performed a maximum of one prayer a month in the mosque during the off-season of pilgrimage, while 43.7 per cent of the respondents attended the same number in the season of pilgrimage.

The second pair of questions were aimed, again, to find out whether or not the residents' attendance of Friday prayers in the Haram varied between the season of pilgrimage and the rest of the year. The answers indicate, as with Daily prayers, the population of the city observed the Friday prayer in the Haram less frequently in the season of pilgrimage than in the off-season. As presented in Tables D3 and D5, 40.6 per cent of the respondents observed the Friday prayers in the Haram every Friday in the off-season of pilgrimage, compared with 27.4 per cent in the pilgrimage season; 24.5 per cent of the sample performed the Friday prayers in the Haram once every two Fridays in the off-season, in contrast to 25.5 per cent in the season of pilgrimage; and 34.8 per cent of the population attended the Friday prayers in the Haram less often in

the off-season, while 47.1 per cent attended in the pilgrimage season.

This phenomenon can be explained by two main factors: Firstly, the Haram is not large enough to accommodate the demands of both visitors and residents of the city for prayer places in the season of pilgrimage. A lot of people observe the prayers in the Squares and nearby streets; secondly, access to the Haram is very difficult during the pilgrimage season, especially for those who live outside the Central Area, because the area is too crowded with visitors. Some of the main roads in the area are blocked and the traffic is diverted towards the periphery of the city. For these reasons most of the people of Al-Medina perform the prayers in the other mosques that are distributed all over the city. In addition, many residents try to give the pilgrims a chance to observe the prayers in the Haram, which is the main reason for their visit.

Cross-tabulation between the numbers of Daily and Friday prayers observed by the respondents and gender, reveals that females attend the prayers in the Haram less frequently than males. This is because, from the religious point of view, male members of the society are obliged to perform the Friday prayers and encouraged to observe the Daily ones in congregation, while it is preferable for females to observe them in their own houses, because they have more responsibilities there. The data presented in Table E5 show, for example, that in the off-season of pilgrimage 22.8 per cent of the male respondents, as compared with 12.4 per cent of the females, observed at least three Daily prayers in the Haram every day. Also, 18.8 per cent of males, in contrast to 49.8 per cent of the females, did not attend more than one prayer in the Haram a month.

Correspondingly, Table E6 demonstrates, for instance, that in the off-season 58.8 per cent of the males, as compared with 20.2 per cent of the females, performed the Friday prayer in the Haram every week.

With reference to a question asking about the distances between the respondents' houses and the Haram, 11.9 per cent of the respondents reported that they lived at a distance less than 500 metres from the Haram; 17.9 per cent lived at a distance between 500 metres to one kilometre, 22.7 per cent lived at a distance between one and two kilometres; 32.1 per cent lived at a distance between two to five kilometres and 15.4 per cent lived in areas more than five kilometres away from the Haram (Table D6).

With regard to a similar question dealing with distances between places of work and the Haram, respondents who did not have a permanent job were asked to omit the question. They constituted 59.2 per cent of the sample. According to Table D8, 16.9 per cent of the respondents who worked reported that their places of work was located at less than 500 metres distance from the Mosque; 17.4 per cent between 500 metres and one kilometres; 20.0 per cent between one kilometre and two kilometres; 22.8 per cent between two and five kilometres; and 22.9 per cent worked in places at further distances from the Haram.

The next set of question pertained to car ownership and transport. The first in the series asked about the number of cars (used primarily for family transport) owned by the respondents or other members of their households. As shown in Table D9, only 11.8 per cent of respondents' households did not own a car; 60.1 per cent had one car; and 28.0 per cent owned two cars or more. This

was followed with another question dealing with how the respondents generally got to the Haram for the prayers. The replies as shown in Table D10 revealed that less than one third (31.8 per cent of the respondents) got to the Haram on foot; almost double that percentage (57.4 per cent) got there by private car; only 3.3 per cent by bus; 5.5 per cent by taxi and 2.0 per cent got there by other means. From the data it can be calculated that more than two-thirds, (68.2 per cent) of the respondents used one kind of transport or another to get to the Haram. This phenomenon raises an important question regarding the relationship between the way in which the people get to the Haram and how far they live from it.

Cross-tabulation of the distances between the respondents' houses and the Haram, and the mode of transport they used to get there, reveals that not only the people who lived far from the Mosque relied heavily on transport (mainly private cars), but also those who lived near to it. According to Table E7 and Fig. 6.1, those who got to the Haram for prayers by private cars constituted 23.7 per cent of the respondents who lived at less than 500 metres distance from it: 49.3 per cent of those at a distance between 500 metres and one kilometre; 60.8 per cent of those at a distance between one and two kilometres; 66.0 per cent of those at a distance between two and five kilometres; and 81.6 per cent of those whose houses were located at more than five kilometres distance from the Haram.

Respondents who got to the Haram for the prayers by private cars were then requested to indicate how long it took them, travelling by car from the Haram, to get to their houses after observing a Friday prayer during the off-season of pilgrimage.

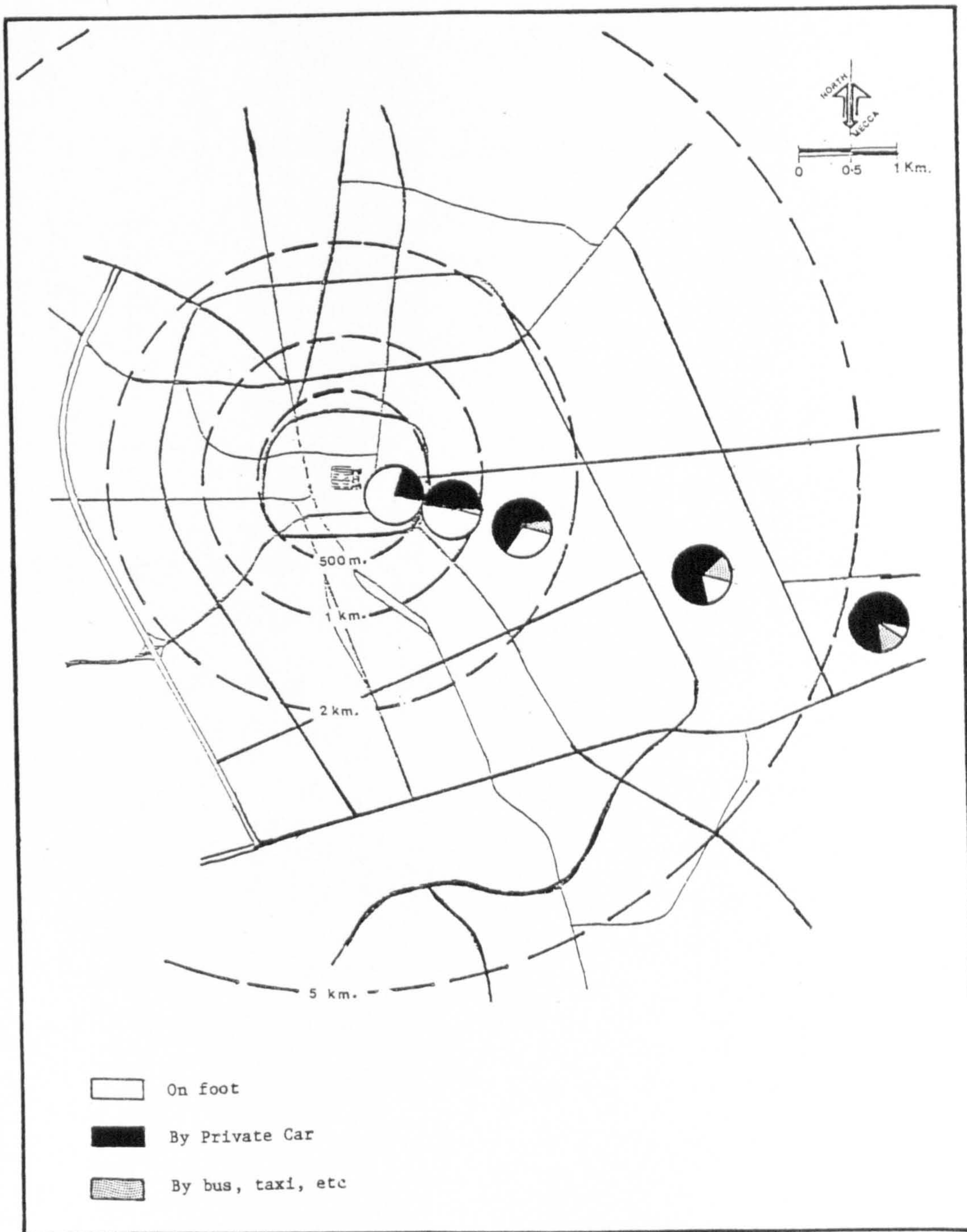


Fig. 6.1 The relationship between the distances between the residents' houses and the Haram, and the mode of transport they used to get there for prayers.

This was followed with a similar question about travelling time after attending a Daily prayer. The responses to the two questions indicated that the people who got to the Haram by car spent more time in travelling after observing a Friday prayer than after a Daily one. For example, 22.8 per cent of the respondents spent less than 10 minutes in travelling after observing a Friday prayer, compared with 38.3 per cent who spent the same length of time after attending one of the Daily prayers; and 27.4 per cent spent between 20 and 30 minutes after performing a Friday prayer, in contrast to 16.0 per cent who spent the same length of time after a Daily prayer (Tables D11 and D12).

Cross-tabulation between the number of Daily and Friday prayers observed in the Haram and the distances between the Haram and the respondents' houses indicate that the closer the respondent's house to the Haram, the more Daily and Friday prayers he or she is likely to perform in it. Table E8 shows, for example, that 37.1 per cent of those who lived at less than 500 metres distance from the Haram, as compared with 25.1 per cent of those who dwelt between 500 metres and one kilometre, 14.9 per cent of those who resided between one and two kilometres, 12.0 per cent of those who lived between two and five kilometres, and only 11.3 per cent of those who lived at further distances from the Haram, observed three Daily prayers or more every day there in the off-season of pilgrimage. Again Table E9 reveals, for instance, that 53.3 per cent of the respondent who lived at less than 500 metres distance from the Mosque, in contrast to 40.4 per cent of those who resided at a distance between 500 metres and one kilometre, 41.5 per cent of those dwelling between one and two kilometres, 40.9 per cent of

those living between two and five kilometres, and only 26.4 per cent of those whose houses were at a further distance from the Haram, usually performed every Friday prayer there, in the off-season of pilgrimage.

Now we turn to a group of questions dealing with respondents' backgrounds. The age and sex of the respondents were described earlier. This directs us to a question about marital status. The data reveals that 60.9 per cent of the people who participated in the survey were married; 32.6 per cent were single; while the rest (6.5 per cent) were widowed or divorced, (Table D37).

With reference to the answers to a question dealing with occupation, 14.2 of the respondents reported that they were self-employed; 23.7 per cent employed; 4.4 per cent unemployed; 4.3 per cent retired; 28.2 per cent students; and housewives constituted 25.2 per cent of the sample (Table D38). Regarding the educational level of the respondents, the data presented in Table D39 show that 16.2 per cent of the sample could neither read nor write; 20.6 per cent could read and write; 21.9 per cent completed primary education; 19.5 per cent completed intermediate school education; 11.5 per cent held a secondary school certificate or its equivalent; 7.5 per cent held a bachelor's degree (university first degree) or its equivalent; and 2.7 per cent attained higher academic qualifications.

In response to a question asking about the type of house in which the respondent lived, 21.3 per cent of the sample indicated that they lived in villas; more than double that percentage (44.5 per cent) lived in flats; only 3.3 per cent resided in old

Al-Medina's traditional houses; 28.4 per cent lived in ordinary houses of brick or blocks; and the rest (2.6 per cent) lived in other types of houses (Table D41). Then the respondents were requested to indicate whether they owned their houses, or whether they were rented, or "other" than these. In response 63.7 per cent of the respondents reported that they owned their houses; almost half of that (33.4 per cent), lived in rented houses and only 2.9 per cent indicated "others" than these (Table D42). The last item of the survey asked about the total monthly income of the household. In response, slightly less than half the number of respondents (45.3 per cent), reported that their household income was below 3000 SR; 26.9 per cent indicated 3000 to 4999 SR; 14.1 per cent indicated 5000 to 8999 SR; and only 13.8 per cent reported that their income was 9000 SR or more (Table D43).

Before turning to the attitude questions, it should be mentioned here that the responses to some of the factual questions will be regrouped in order to reduce the number of classes for the variables, to simplify the analysis. So, from now onward age will be regrouped to: over 17, up to 37 years; over 37, up to 57 years old; and over 57 years old. For brevity of expression people in these age groups will be referred to as young, middle-aged and old respectively. Similarly, respondents will be regrouped according to their education into three categories: those who did not complete the primary school education; holders of primary or intermediate schools' certificates or their equivalent; holders of the secondary school's certificate or its equivalent or a higher qualifications. They will be referred to as: low, middle, and high education groups respectively.

The first attitude question the respondents were requested to answer dealt with residents' opinions about the distances between their houses and the Haram. Since the Haram is regarded as the centre of the city, locations of objects are usually described in relation to it. Obscure phrases, such as 'near', 'not far' and 'far' are regularly used. The aim of the question is to ascertain the importance of such words, i.e. how far the place is considered to be far from, or how near to the Haram from the people's point of view. The question comes immediately after the one asking about the distances, in metres and kilometres, between the respondents' houses and the Haram. It reads, "Do you consider your house near or far from the Haram?". Specifically the respondents were asked to indicate whether they considered them were near to the Haram, far from it, or in between. In response, 22.5 per cent of the sample reported that they considered their houses were near to the Haram; 24.2 per cent thought that they were far from it; and the remainder (53.2 per cent) regarded their houses as located somewhere in between (Table D7).

Cross-tabulation of the responses to the two questions, presented in Table E10 and Fig. 6.2, shows that the majority (70.5 per cent), of the respondents who lived at less than 500 metres distance from the Haram, as compared with 39.8 per cent who lived at a distance between 500 metres and one kilometre, 18.1 per cent who lived between one and two kilometres, 6.7 per cent who lived between two and five kilometres and only 3.0 per cent (one respondent) whose house was located at more than five kilometres away from the Haram, indicated that they considered their houses were near to it. On the contrary, only 3.4 per cent (two respondents) of those

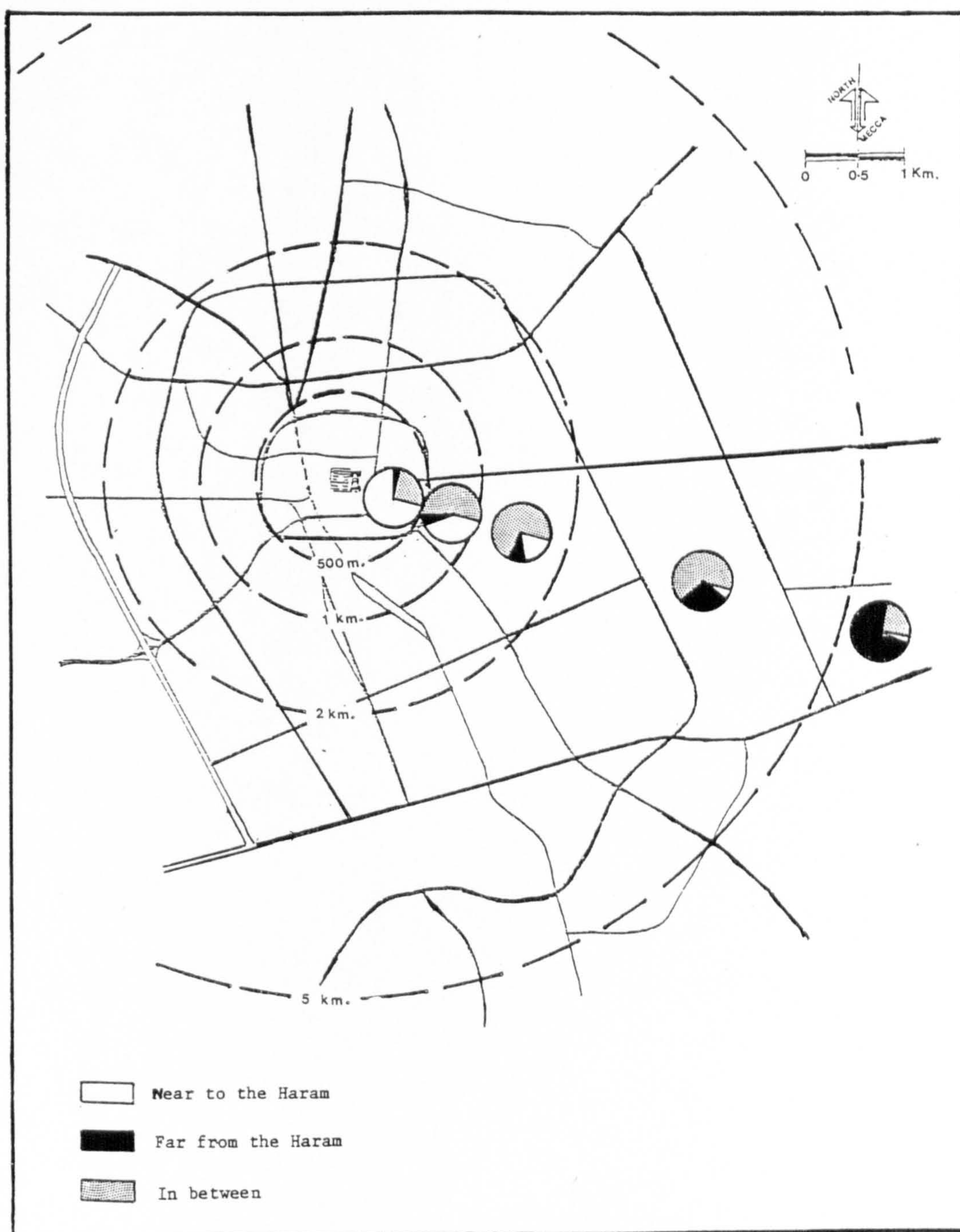


Fig. 6.2 The relationship between the distances between the residents' houses and the Haram, and whether they considered them were near or far from it.

who lived at less than 500 metres distance from the Haram, compared with 6.2 per cent of those who lived at a distance between 500 metres and one kilometre, 7.6 per cent who lived between one and two kilometres, 28.3 per cent whose houses were located between two and five kilometres, and most (72.1 per cent) of those who dwelt at more than five kilometres away from the Haram, regarded the location of their houses as far from the Mosque. While 41.3 per cent of the respondents who resided at less than 500 metres distance from the Haram, in contrast to 53.8 per cent of those who lived between 500 metres and one kilometre, 74.4 per cent who dwelt at a distance from one to two kilometres, 65.0 per cent whose houses were located between two to five kilometres away from it, and only 24.9 per cent of those who lived at more than five kilometres distance from the Mosque, thought that their houses were located somewhere in between, neither far from nor near to the Haram.

In another question, designed to elicit public opinion regarding living in different parts of the city, respondents were asked, "Regardless of where you live, if you had the choice of living in the Haram Area or in the periphery of Al-Medina, what would you choose?". They were given three choices: the Haram Area, the periphery of the city, and somewhere in between. The responses to this question, as shown in Table D13, demonstrate that a substantial number of the Al-Medina population preferred to live in the Haram Area, as mentioned by 42.4 per cent of the respondents. Only 18.8 per cent responded that they would choose to live in the periphery, while, the rest (38.8 per cent) indicated somewhere in between as their choice.

This question was followed by a series of statements dealing

with some environmental aspects of Al-Medina. The respondents were requested to indicate whether they agreed or disagreed with each of them. They were introduced by the following passage:

"The following are a few things that some people have said about Al-Medina. For the purpose of this study, it is important to know whether you personally agree or disagree with each point of view. Please tick one box which best fits your own opinion for each statement."

Then the series started with a statement designed to measure public awareness towards changes in the city. Patterns of responses revealed that the vast majority of the residents of Al-Medina think that their city has changed. 93.1 per cent of the respondents, as shown in Table D14, agreed with the statement: "Al-Medina is not the city it was several years ago".

In contrast, the respondents were more evenly divided on their city's identity. As can be seen from Table D15, almost half of the sample (48.1 per cent), agreed with the statement, "One feels when one is walking or driving in some areas of Al-Medina, that one is in a different city, not Al-Medina." It was expected that the more educated and the older people would be more conscious of the issue, so they were anticipated to be the most likely to agree with the statement. However, exactly the opposite was true for the educated respondent. Cross-tabulation between the responses and levels of education, presented in Table E11, shows that there is a consistent tendency (although the differences are not very large): as educational level rises, the proportion of respondents who agree with the statement decreases - 51.3 per cent of the lower educated respondents, as compared with 49.9 per cent of the middle educated

and only 37.7 per cent of the higher educated, reported that they felt when they were walking or driving in some areas of Al-Medina, that they were in a different city. Cross-tabulation between the age of the respondents and their replies to the statement indicates that it is unlikely that they are related. As shown in Table E12, 48.6 per cent of the young respondents, in contrast to 54.0 per cent of the middle-aged, and 44.7 per cent of the older, agreed with the statement.

In an item designed to elicit the residents' perceptions of change regarding the city's appearance, respondents were asked to give their views on the statement, "The appearance of Al-Medina, aside from other things, was better several years ago than it is today." Again respondents were divided on this issue, as shown in Table D16: almost half of them (48.6 per cent), agreed with the statement. Cross-tabulation between respondents' answers and their ages reveals that the older respondents were the most likely to think that the appearance of the city was better in the past.

According to Table E13, 44.0 per cent of the young people, and 44.7 per cent of the middle-aged, as compared with 66.8 per cent of the old, agreed with the statement. In contrast, when the respondents were divided according to the total income of their households, those who came from high income households were less likely to agree with the statement than the others. As can be seen from Table E14, 50.2 per cent of the respondents whose household income was below 3000 SR, as compared with 58.8 per cent of those whose household income was from 3000 to 4999 SR, 38.6 per cent of those whose household income was from 500 to 8999 SR, and only 20.4 per cent of those whose household income was 9000 SR or more, agreed with the

statement.

After that, respondents were requested to give their opinion about the contribution of the new development in the Central Area to the religious character of the city. They were specifically asked to agree or disagree with the statement, "The recent developments in the central area of Al-Medina have not contributed much to the spiritual nature of the city." In response, the majority (76.5 per cent) of the respondents agreed with the statement (Table D17). When they were classified according to their level of education, patterns of the responses to the statement, as shown in Table E15, demonstrate that there is a consistent tendency (although the difference between the percentages of those who agree with the statement in each level is not very large) for those with more education to be more critical about the deficiency of the new developments than those with lower education: 72.6 per cent of the lower educated people, as compared with 79.4 per cent of those with middle education, and 81.0 per cent of the higher educated, think that the new developments in the central area of Al-Medina have not contributed much to the spiritual nature of the city.

Then, in an item intended to draw out the residents' attitudes towards building high-rise structures in the central area of Al-Medina, respondents were asked to give their opinions about the statement, "High-rise buildings should no longer be allowed to be built in the Haram Area." Most of the respondents (87.1 per cent) agreed with the statement (see Table D18). Again, when the respondents were grouped according to their educational levels, the pattern of the answers, as presented in Table E16, reveals that the more educated the individual, the more likely the opposition to

building high-rise structures in the Haram Area: 82.8 per cent of the lower educated respondents, compared with 88.2 per cent of the medium educated and almost all the highly educated (96.2 per cent), indicated that high-rise buildings should no longer be allowed to be built in the area. While cross-tabulation of the responses to the statement and total monthly income of the respondents' households, as shown in Table E17, demonstrates that it is less likely that the household income of the respondent influenced his or her attitude toward the issue in question, 88.8 per cent of the respondents whose household income was below 3000 SR, in contrast with 83.3 per cent of those whose household income was from 3000 to 4999 SR, 90.9 per cent of those whose household income was from 5000 to 8999 SR and 81.3 per cent of those whose household income was 9000 SR or more, agreed with the statement.

After that, the respondents were asked about their attitude regarding the architectural style of the new buildings. In particular, they were requested to indicate their opinions about the statement, "New buildings in Al-Medina should reflect the traditional local architectural character of the city". In response, most of the people (88.1 per cent) agreed with the statement (see Table D19). This was followed with another statement reading, "It is easier for visitors of Al-Medina to find their way to the Haram now than it was several years ago". Again, most of the respondents (89.2 per cent) agreed with the statement (see Table D20).

It is worth noting that the respondents' agreement with this statement does not necessarily imply that the city is more legible now than it used to be. Alternatively, the phenomenon that most of

the respondents think that it is easier for visitors to Al-Medina to find their way to the Haram now than several years ago, may be attributed to one or a combination of the following factors: the visitors stay in places nearer to the Haram now than formerly; they are better looked after by their adilā' (visitors' guides) and other related agencies; the streets in Al-Medina, especially those leading to the Haram, are sign-posted and the visitors are more educated now than was the case several years ago.

The next set of statements pertained to the bridges which recently became significant features of the central area of Al-Medina. Respondents were asked to agree or disagree with each statement. The first one reads, "Bridges have created more traffic problems in the central area of Al-Medina than have been solved". In response, only slightly more than quarter of the respondents (26.7 per cent), agreed with the statement (Table D21). When the respondents were divided into educational groups the data, presented in Table E18, show that the more educated respondents were less likely to agree with the statement than the less educated; 38.6 per cent of the lower educated respondents, in contrast to 25.3 per cent of the middle educated, and only 13.8 per cent of the higher educated, thought that the bridges had created more problems than have been solved. On the other hand, when the people were classified according to age the data, shown in Table E19, show that the young respondents were the least likely to agree with the statement than the old; 18.3 per cent of the young people, as compared with 35.8 per cent of the middle-aged, and 34.6 per cent of the old, agreed with the statement. Cross-tabulation of the responses to the statement and the mode of transport in which the

respondents got to the Haram for prayers indicates that a slightly higher percentage (29.9 per cent) of those who came to the Harem on foot agreed with the statement than those who used private cars, buses, taxis and other transport combined together (25.1 per cent) (see Table E20).

The second statement dealt with the effect of bridges on the city character. It reads, "Apart from other things, bridges do not fit in with the spiritual and historical nature of Al-Medina". The respondents were more divided on this issue, nearly half of them, (48.1 per cent) agreed with the statement (see Table D22). When the respondents were divided into different educational levels, those with more education were the least likely to agree with the statement. As can be seen from Table E21, of those with a higher education, 31.4 per cent thought that bridges did not fit in with Al-Medina, in contrast to 53.8 per cent of those with middle education, and 52.2 per cent of those with low education. However, classification of the respondents into different age groups, revealed that it is unlikely that the respondents' opinions were related to their age. According to Table E22, 48.5 per cent of the young people indicated that bridges did not fit in with the city, compared with 44.1 per cent of the middle-aged, and 52.1 per cent of the old. In contrast, variations occurred between the respondents who came to the Haram for the prayers on foot and those who did not. Those who came on foot were more likely to think the bridges do not fit in with Al-Medina than those who used transport. As shown in Table E23, 62.5 per cent of those who came on foot, as compared with 41.9 per cent of those who used transport, agreed with the statement.

Finally, the third statement was designed to sum up the issue regarding bridges. It reads, "Bridges should not be built any more in the central area of Al-Medina." In response 40.3 per cent of the sample agreed (Table D23). Unlike the previous statements, differences in level of education, age groups and mode of transport had little effect on people's responses. As shown in Table E24, 36.9 per cent of the young opposed building more bridges, as did 43.2 per cent of the middle-aged, and 43.1 per cent of the old people. Also, Table E25 reveals that 46.9 per cent of the lower educated, compared with 36.2 per cent of the middle educated and 37.7 per cent of the higher educated, expressed the same opinion. Furthermore, Table E26 shows that 37.8 per cent of those who got to the Haram for prayers on foot, as compared with 41.5 per cent who used transport, opposed building more bridges.

Comparison between the responses to the last statement and the one dealing with high-rise buildings indicates that the people opposed constructing more high-rise buildings much more than they opposed building more bridges (83.1 versus 40.3 per cent). This suggests that the public regard building more bridges as less distracting to the spiritual and historical nature of the city, or else that they are inevitable and unavoidable, or both, as compared with high-rise buildings.

The next series of items dealt with aspects related to pedestrian and vehicular movement in Al-Medina. The series opens with the statement, "Because of the mixed pedestrian and vehicular traffic in the central area and other environmental factors, it is more difficult now for one to maintain calmness and tranquillity while walking to the Haram for observing prayers than in the past." Responses, presented in Table D24, indicate that the

majority of the respondents (84.8 per cent), agreed with the statement. Differences in age and level of education had an insignificant effect on people's opinions. According to Table E27, 83.8 per cent of the young respondents, in contrast to 84.6 per cent of the middle-aged, and 85.0 per cent of the older people, agreed with the statement. Similarly, 88.2 per cent of the respondents with low education agreed with the statement, as did 80.7 per cent of those with middle education and 88.1 per cent of those with higher education (Table E28).

Some variation appeared, however, between those who got to the Haram on foot and those who did not, suggesting that pedestrians were the most likely to experience problems. As shown in Table E29, 92.2 per cent of those who got to the Haram on foot think that maintaining calmness and tranquillity while walking to prayers is more difficult now than it used to be, while to 81.1 per cent of those who used one type of transport or another to get there, expressed the same opinion.

Regarding pedestrianization of the Central Area, respondents were asked to give their opinion on the statement, "All cars and car-parking should be kept outside the Haram Area, except those used by the residents of the area and for emergencies." In response the majority of the sample (81.0 per cent) agreed (Table D25). Differences in age had some effect on people's attitudes; the older people were the most likely to be in favour of the idea. As can be seen from Table E30, 94.5 per cent of the older respondents, in contrast to 73.2 per cent of the middle-aged, and 81.9 per cent of the young, agreed with the statement. Yet the respondents' levels of education had little effect on their opinions: 85.4 per cent of

the lower educated agreed with the statement, as did 77.8 per cent of those with middle education and 85.8 per cent of the higher educated (Table E31).

On the other hand, those who lived near to the Haram were the most likely to be in favour of pedestrianization. As shown in Table E32, 92.8 per cent of those who lived within 500 metres from the Haram, as compared with 75.4 per cent of those who lived between 500 metres and one kilometre, 84.6 per cent of those dwelling between one and two kilometres, 75.7 per cent of those residing between two and five kilometres, and 76.0 per cent of those living in areas more than five kilometres distant from the Haram, agreed with the statement. A slightly higher percentage of the respondents who came on foot to the Haram supported the idea than those who used transport (85.3 versus 78.7 per cent) (Table E33).

For a further elaboration of the pedestrianization issue, respondents were asked to give their opinion about the statement, "Shaded pedestrian walk-ways are essential for encouraging people to walk to the Haram instead of driving". Most of the respondents, (94.4 per cent) agreed (Table D26). Almost all of those who disagreed with the statement were the young. As shown in Table E34, 91.3 per cent of the young, compared with 98.3 per cent of the middle-aged, and all (100.0 per cent) of the older people, supported the idea.

Regarding the potential utilization of public transport in the city, respondents were requested to give their response to the statement, "Improvement of public transport (buses) will reduce the traffic congestion in the Central Area". In response, 86.9 per cent of the sample agreed (Table D27). Differences in people's

backgrounds had little effect on their responses to the issue. For example, 88.5 per cent of those of lower education, as compared with 87.1 per cent of those of middle, and 84.1 per cent of the highly educated, believed that improvement of public transport would reduce the traffic congestion in the area (Table E35).

After that, in an item designed to elicit public attitudes towards the disappearance of the traditional streets and activities which used to encircle the Haram, respondents were requested to give their opinions on the statement, "The old street pattern and the traditional commercial activities around the Haram are the most important characteristics which Al-Medina lacks today." The majority (71.4 per cent) of the respondents agreed with the statement (see Table D28). When they are divided into different age groups, the data showed that (although the difference between the percentages is not very large) there is a consistent tendency for the older respondents to be more likely to miss such an environment than for the younger people. According to Table E36, 66.7 per cent of the young, in contrast to 74.6 per cent of the middle aged, and 76.8 per cent of older people, agreed with the statement.

The next set of statements was intended to elicit the public's attitudes towards conservation of some historical buildings and quarters in the Central Area of the city. Respondents were asked to agree or disagree with each statement and to indicate why. The set started with a statement dealing with Zukāk al-Ṭayār's quarter (to the west of the Haram), in which some historical buildings were demolished one year before conducting the survey. The statement reads, "Some of the historical buildings

which used to be in Zukak al-Tayar had to be conserved." In response 64.8 per cent of the respondents agreed (see Table D29). Differences in age and level of education had little effect on people's attitudes towards the issue. The data presented in Table E37, show that 62.6 per cent of the young agreed with the statement, as did 65.7 per cent of the middle-aged and 64.4 per cent of the older people. Similarly, Table E38 reveals that 67.3 per cent of the lower educated, compared with 68.5 per cent of those with middle education and 59.7 per cent with higher education, agreed with the statement. The respondents who came from high income households were more likely to oppose the conservation than those who came from low income households. The data presented in Table E39 indicate that 70.7 per cent of those whose household income was below 3000 SR thought that the buildings had to be conserved, in contrast to 59.3 per cent of those whose household incomes were from 3000 to 4999 SR, 64.9 per cent of those whose household incomes were from 5000 to 8999 SR, and only 48.5 per cent of those whose household incomes were 9000 SR. or more, who thought so.

In response to the item which asked for reasons for the agreement or disagreement with the statement, the data presented in Table D30, more than half (sixty four out of one hundred and sixteen respondents) of those who thought that some of the historical buildings which used to be in Zukāk al-Tayār had to be conserved, stated the reason as conservation of the history and heritage of the city; sixteen respondents indicated remembering their predecessors; six respondents reported that the conservation of historical buildings links the present with past, i.e. it maintains

the historical continuity of the area; four respondents indicated that the area is near to the Haram, and as such is considered to be a natural extension of it; again, another four respondents mentioned the beauty of the area, while the rest (twenty two respondents) did not indicate any reason for their agreement.

On the other hand, fourteen respondents out of sixty three respondents who disagreed with the statement indicated that they opposed the conservation because most of the buildings in the area were structurally deteriorating and dangerous to their inhabitants and the general public. The same number of respondents stated that the quarter as a whole stood in the way of progress and modernization of the city. Eleven respondents reported that the demolition of the buildings was necessary for enlarging the streets leading to the Haram. Eight respondents reported that the area did not have a significant historical value, i.e. it does not date back to the time of the Prophet. Four respondents thought that clearance of the buildings was unavoidable for the enlargement of the quarter's own streets in order to provide public utilities in the area. Another four suggested other reasons, while, six respondents did not state any explanation for their disagreement.

The next statement dealt with the quarter of Bāb al-Mad̲j̲idī, (to the north of the Haram) which was cleared just after the survey had been carried out. The statement reads, "Bāb al-Mad̲j̲idī is an important historical area and has to be conserved". The respondents were more divided about the conservation of this area than of the last one: 56.5 per cent of them were in favour of the conservation (Table D31). Young people were the least likely to support the conservation. According to Table E40, 48.1 per cent of

the young as compared with 69.2 per cent of the middle-aged and 53.8 per cent of the old, agreed with the statement. Again the respondents who came from high income households were the least likely to support the conservation. As Table E41 shows, 50.9 per cent of those whose household income was below 3000 SR thought that Bâb al-Mad̲j̲idī's quarter had to be conserved, so did 66.5 per cent of those whose household income was from 3000 to 4999 SR, 60.5 per cent of those whose household income was from 500 to 8999 SR., and only 36.4 per cent of those household income was 9000 SR or more.

The explanations given for the agreement or disagreement with the statement indicate that the main reason for thinking that the area had to be conserved was the preservation of the history and heritage of the city, mentioned by fifty-two out of one hundred and two respondents who agreed with the statement. In addition, twelve respondents stated that the area was considered to be a natural extension of the Haram. Five respondents reported remembering their predecessors, and another five mentioned other reasons. The rest of those who agreed (twenty eight respondents) did not state any explanation (Table D32).

The people who were opposed to the conservation of the area were more divided on their reasons than were those who supported it. Thirteen out of the seventy eight respondents who disagreed with the statement indicated that preservation of the area hinders progress and the modernization of the city. Twelve respondents stated that the conservation restricts the enlargement of the Haram. Another twelve stated that it is an obstacle to the enlargement of the street leading to the Haram. Ten respondents thought that most of the buildings in the area were structurally

deteriorating. Another ten felt that the quarter did not have any important historical value. Eight respondents indicated that the quarter's streets were too narrow to accommodate the contemporary services required by the people living in the area. Two respondents suggested reasons other than those stated above, while the remainder (eleven respondents) did not mention any (Table D32).

The third statement dealt with al-Aghwāt's quarter (to the south-east of the Haram) which had been entirely levelled before the survey was carried out. The statement reads, "al-Aghwāt's quarter was an important historical area and had to be conserved." Unlike the case of Zukāk al-Tayār and Bāb al-Mad̲j̲idī, a few people (35.7 per cent of the respondents) agreed with the statement, suggesting that the people's replies were influenced by the fact that the whole quarter was already demolished and nothing could be done about that (Table D33). As in the case of the quarter of Bāb Al-Mad̲j̲idī, the young were the least likely to be sympathetic to the conservation. As shown in Table E42, 25.1 per cent of the young, in contrast to 43.8 per cent of the middle-aged, and 50.7 per cent of the older people, stated that al-Aghwāt's quarter had to be conserved.

With reference to the reasons given for the replies, the most prominent incentive for those who stated that the quarter should have been conserved was the preservation of the history and heritage of the city, reported by thirty three out of sixty two respondents. Remembering their predecessors was mentioned by seven respondents. The area was considered to be a natural extension to the Haram reported by three respondents. Only one respondent mentioned the beauty of the quarter. The rest (eighteen respondents) did not indicate any reason (Table D34).

On the other hand, many of the people who were opposed to the conservation of the area reported that its demolition was necessary for the enlargement of the Haram (mentioned by forty two out of one hundred and ten respondents). The next largest group was twenty three respondents who stated that the buildings in the area were structurally deteriorating and unsafe both for the people who live there and for the public in general. Six respondents reported that it was an obstacle to the progress and modernization of the city. Another six respondents stated that it stood in the way of enlarging the street leading to the Haram. In addition, fifteen respondents mentioned other, different, reasons. The rest of those who disagreed (eighteen respondents) did not indicate why they did so (Table D34).

Three blank pages were left in the end of the questionnaire booklets, in which respondents were asked to write any further things they wished to add. In response, only 14.2 per cent (26 respondents) wrote comments (Table D45). Although the percentage is relatively small, those who added comments came from different backgrounds. For example, as far as age is concerned, 18.1 per cent of the young, 11.9 per cent of the middle-aged, and 12.0 per cent of the older respondents wrote comments (Table E43). Also, according to Table E44, 16.2 per cent of the male respondents, and 12.5 per cent of the female wrote comments. In addition, as shown in Table E45, those who commented constituted 11.6 of the lower educated, 16.9 per cent of those of middle education, and 15.7 per cent of the highly educated people.

The comments dealt with different aspects of the development of Al-Medina. The need for conservation of historical buildings

and the revival of the Islamic character of the city in the new development were reported by four people. Regarding height of buildings, three respondents stated that high-rise buildings should not be built, not only in the Haram Area but also in the city as a whole. Another two added further that it is desirable for all the buildings in Al-Medina to be painted with one colour, and preferably white. With regard to pedestrian and vehicular traffic in the Central Area, two respondents stressed the necessity of segregation of pedestrian from vehicular traffic by restricting the streets around the Haram to pedestrian use and building pedestrians tunnels under the important road junctions. They also emphasized the need for shading the pedestrian walk-ways in order to be fully utilized by the people. Another writer suggested regular bus services, particularly during prayer times, from all parts of the city to the Haram to reduce traffic congestion in the area. Three respondents cited the shortage of car-parking spaces, especially in the Central Area.

In addition, two respondents wrote that for a better understanding of the nature of the city and the needs of the people, the public should be consulted and should participate in the planning process of their city. Also, other points outside the scope of this study were raised. For instance, the lack of co-ordination between the authorities responsible for the infrastructure of city, e.g. a road is asphalted first then dug up several times for water, drainage, electricity and telephone installations. Also the shortage of recreational facilities, for example, parks for families and sport grounds for the young.

Above all, the comments reveal that the respondents answered

the questionnaire seriously. Some of them considered it a step forward for a better understanding of the problems which threaten the city today. Others expressed their gratitude for being given the opportunity to participate in this study and to state their own comments.

Finally, it is worth closing this section with one of the respondents' comments. The respondent was a student in the 17 to 27 age group. She wrote:

"The City of Al-Medina has improved considerably compared with its situation several years ago. Bridges and tunnels solved some of the traffic problems, but as they increase in number they spoil the beautiful historical character of the city. There is a shortage of community facilities and proper organization in some parts of the city.

Some of the old quarters are distinguished features of the historical nature of the city. They should be conserved, especially those which represent the history of the elegant old city of Al-Medina."

6.2.2 Attitudinal Differences

This part highlights the association between the respondents' background and their attitudes toward the environment. The detailed analysis of the survey indicates that age, level of education and the total household income of the respondent are the principal variables that influenced the people's attitudes. Thus, they will be the main theme of the discussion.

The relationship between each one of these variables and the respondent's attitudes varies according to the issue in question. For example, age is likely to influence the respondent's attitude

towards change in the appearance of the city. As described earlier, the older respondents were the most likely to think that the appearance of the city was better in the past than it is today. They were also more likely to be in favour of keeping cars and car-parking outside the Haram Area than were the young and the middle aged. Again, the data show that the older the respondent the more likely he/she was to agree with the statement that "The old street pattern and the traditional commercial activities around the Haram are the most important characteristics which Al-Medina lacks today".

The young people, however, were the least likely to think that, "Bridges have created more traffic problems in the central area of Al-Medina than have been solved." In addition, almost all the respondents who disagreed with the statement, "shaded pedestrian walk-ways are essential for encouraging people to walk to the Haram instead of driving", were the young. They were, also, the least likely to be sympathetic to the conservation of the old quarters, namely, Zukāk al-Tayār, Bāb al-Mad̲j̲idī and al-Aghwāt.

The level of education influenced the respondents' opinions about the contribution of the new development to the spiritual nature of the city. The more educated the individual, the more likely he/she was to think that, "The recent developments in the central area of Al-Medina have not contributed much to the spiritual nature of the city." Again, the more educated the respondent, the more likely the opposition to building high-rise structures in the Haram Area.

Also, the more educated respondents were less likely to agree that, "One feels when walking or driving in some areas of

Al-Medina that one is in a different city." Also, as the educational level rose, the person was less likely to think that, "Bridges have created more traffic problems in the central area of Al-Medina than have been solved." Furthermore, the highly educated people were the least likely to agree with the statement, "Apart from other things, bridges do not fit in with the spiritual and historical nature of the city."

On the other hand, income level of the respondent's household had a significant effect on his/her attitude regarding the identity of the city. The higher the household income of the respondent, the less likely he/she was to agree with the statement, "One feels when one is walking or driving in some areas of Al-Medina, that one is in a different city, not Al-Medina". Again, the respondents who came from high income households (9000 SR or more a month) were the least likely to be in favour of conserving the old historical quarters. Finally, apart from these differences, age, level of education and income level had little effect on the people's attitudes as far as this study is concerned.

NOTES AND REFERENCES

1. GACDAR (Group of Arab Consultants for Development and Reconstruction, Project No. 202, Ministry of Municipal and Rural Affairs, Riyadh, Report No. 5, V.1, p.43.

CHAPTER SEVEN:

ANALYSIS OF THE SURVEY OF VISITORS

This chapter is concerned with the analysis of the visitors' survey. It consists of two main sections: the first describes the data, and the second is devoted to the findings of the questionnaire in detail.

7.1 THE DATA

The visitors' sample survey was comprised of 205 respondents chosen on a combination of purposive and probability sampling basis, as explained in Section 5.3.2., from pilgrims from 26 countries (see Table F41*, for nationalities and percentages). They were residents of 27 countries (Table F42). Their classification according to nationalities and geographical regions indicates that 16.2 per cent of the sample were Saudi Arabians; 25.0 per cent were Arab Asians; 19.6 per cent were non-Arab Asians; 27.5 per cent were Arab Africans; 6.9 per cent were non-Arab Africans; and 4.9 per cent were Europeans, North and South Americans and Australians (see Table F45).

* In this chapter, the letters in the tables' numbers refer to the appendices' numbers, while the figures refer to the tables' numbers.

Classification of the respondents according to the regions in which they lived reveals that 23.2 per cent of them resided in Saudi Arabia; 29.6 per cent lived in the Arab Countries of Asia; 15.3 per cent lived in the non-Arab Countries of Asia; 17.7 per cent resided in Arab Countries of Africa; 6.9 per cent lived in the non-Arab Countries of Africa, and 7.4 per cent were residents of Europe, North and South America and Australia (Table F46). In addition, the data show that the respondents who lived in Saudi Arabia (47 respondents) came from different parts of the country - five respondents lived in the Riyadh Area, ten in Jeddah, another ten in Dammam, four in Al-Hufuf, three in Anaiza, five in Jaizan, and four in Taif. The rest (six respondents) resided in other parts of the country (Table F43).

According to the survey methodology, it was intended that 25.0 per cent of the respondents should be females. Because of the difficulties in getting access to them and their lower response rate, as compared with males, they in fact constituted only 14.1 per cent of the sample (Table F28). The demographic representativeness of the sample cannot be checked by means of comparison because^{of} the lack of the appropriate statistics.

Limited census data are produced annually about the hadij (pilgrimage) in general. These data, for example, indicate that in 1986 (in which the sample survey was carried out) 1,600,475 persons performed the pilgrimage; about 53.5 per cent of them (856,718 pilgrims) were from outside the Kingdom and the rest, 46.5 per cent (743,757 pilgrims) were from inside the country [1]. Saudis constituted about 32.2 per cent (239,207 pilgrims) of the pilgrims from inside the Kingdom and the non-Saudis constituted 67.8 per cent

(504,550 pilgrims). The data indicate that 40.4 per cent of the overseas pilgrims were females. Females also constituted 15.7 per cent of the 227,098 non-Saudis pilgrims from inside Saudi Arabia, who were granted hadi permits. However, the census did not include any information about the sex of the Saudi pilgrims, and the non-Saudis who were living in the country and performed the hadi without permits. Also it did not give any information about the other demographic and socio-economic characteristics of pilgrims such as age, occupation and level of education. In any case these censuses do not help much as far as checking the representativeness of the survey is concerned, because the visit to Al-Medina is not a requirement of the pilgrimage.

The results of the latest sample survey of visitors to Al-Medina, that was carried by Group of Arab Consultants for Development and Reconstruction in 1978, cannot be used either. The proportion of visitors from a country differ from one year to another according to its economical and political conditions. This may effect the other demographic characteristics of the total population of visitors. In addition, the survey ignored some of the basic data about the visitor, such as the sex ratio [2].

7.2 FINDINGS

The findings of the survey will be divided into two parts. The first deals with the detailed analysis of all the survey's variables, while the main theme of the second part is the study of the attitudinal differences among the respondents and correlation

with the variations in their backgrounds.

7.2.1. Detailed Analysis

As in the case of the residents' survey, the questions involved in the visitors' questionnaire can be divided into two categories according to their objective. The first category dealt with factual issues which concerned two types of data. The first type referred to the demographic characteristics of the respondents, such as age, level of education and occupation; the second type dealt with some behavioural aspects of the respondents, for example, attendance at prayers in the Haram, mode of transport used and length of time spent in walking or travelling to get there. The second category, however, dealt with attitudinal questions. Because the first category of questions furnishes the basis for analysing the second one, it will be dealt with first in the analysis. The analysis is mainly based on frequency distributions and cross-tabulations. The Statistical Package for Social Sciences (SPSSX) was utilized for this purpose.

The questionnaire booklet started with an introductory letter. In addition to the instructions for filling in the questionnaire, it explained the aim of the survey and its importance for the development of the Holy City. It also assured the respondents that their replies would be treated in complete confidence, and that no individual would be identified. It instructed them, in addition, to seal up the questionnaire forms in the envelopes provided after completion and not to write their names

or anything else on them in order to further enhance the feeling of anonymity and confidentiality. After that the questions started with an item asking whether the respondent came to Al-Medina alone or with other members of his/her family.

In response, 42.1 per cent of the sample indicated that they came alone; 26.7 per cent came with one member of their family; 6.4 per cent came with two members; and 24.8 per cent came with more than two members of their family (Table F1). This question was followed by a series of questions dealing with accommodation. The first one asked where the respondent lived in Al-Medina. The answers, as presented in Table F2, show that 44.0 per cent of the respondents lived in hotels; 47.0 per cent lived in furnished flats; only 1.5 stayed with a friend or relative; and the rest (7.5 per cent) lived elsewhere.

The respondents who lived in hotels or furnished flats were then requested to indicate whether they shared their rooms with other people or not. In response, only 9.9 per cent reported that they did not share their room with anybody else; double that percentage (18.8 per cent) shared their rooms with another person; 13.3 per cent shared their rooms with two persons; 11.6 per cent shared their rooms with three persons; and almost half of the respondents (46.4 per cent) shared their rooms with more than three people (Table F3).

Cross-tabulation between type of accommodation (hotel or furnished flats only) and number of people who shared one room reveals that rooms in flats were more overcrowded than those in hotels. As shown in Table G1, 83.3 per cent of those who did not share their rooms with anybody else, as compared with 82.4 per cent

of those who shared their rooms with one person, 66.7 per cent of those who shared their rooms with two persons, 66.7 per cent of those who shared their rooms with three persons, and only 17.9 per cent of those who shared their rooms with more than three persons, lived in hotels. On the other hand 16.7 per cent of the respondents who did not share their rooms with anyone else, in contrast to 17.6 per cent of those who shared their rooms with one person, 33.3 per cent of those who shared their rooms with two persons, 33.3 per cent of those who shared their rooms with three persons, and the majority (82.1 per cent) of those who shared their rooms with more than three people, lived in furnished flats. In addition, according to the researcher's personal observations, during the fieldwork, up to nine people were accommodated in one room in some of the apartment buildings in the Haram Area.

Overcrowding of rooms in flats can be explained by the fact that for flats, unlike hotels, there is no law that limits the maximum number of people who can be accommodated in one room during the pilgrimage season. The government is reluctant to introduce such legislation for three reasons. Firstly, there is a shortage of accommodation in the city centre during the pilgrimage season. Second, pilgrims prefer to live in a less comfortable place near to the Haram rather than in more comfortable ones in the periphery of the city, in order to perform as many prayers as possible there during their short stay in the city. Thirdly, restriction of numbers of people in the room leads to an increase in the price of accommodation per person. Consequently, this would make life more difficult for the low income pilgrims.

The visitors preference of living near the Haram is

confirmed by the data. In regards to the distances between the respondents' accommodation and the Haram, 44.6 per cent of the sample reported that they lived at a distance less than 500 metres from the Haram; 38.2 per cent lived at a distance between 500 metres to one kilometre; 10.8 per cent lived at a distance between one and two kilometres; 5.4 per cent lived between two to five kilometres and only 1.0 per cent lived in areas more than five kilometres away from the Haram (Table F4). It is clear from this account that most of the respondents (82.8 per cent) lived within one kilometre of the Haram.

With reference to how the pilgrims generally got to the Haram for prayers, almost all the respondents (97.00 per cent) reported that they got to it on foot; 1.0 per cent got there by private car; another 1.0 per cent by bus; only 0.5 per cent by taxi and another 0.5 per cent (one respondent) got there by other means (Table F6). After that, the respondents who got to the Haram by private car, bus, or taxi were asked to indicate how long it took them travelling from there to get to their accommodation. Only five respondents (2.5 per cent of the sample) used these modes of transport, as can be seen from the responses to the previous question. One of them spent less than 10 minutes; three respondents spent between 10 and 20 minutes and another one spent between 20 and 30 minutes (Table F7). Because the question was applicable only to a few people, the responses to it can be ignored.

Regarding the time spent in walking from the Haram to the respondents' accommodation, 58.3 per cent of the sample indicated that they spent less than 10 minutes; 34.4 per cent spent between 10 and 20 minutes; 3.6 per cent spent between 20 and 30 minutes;

1.0 per cent spent between 30 and 45 minutes; only 0.5 per cent (one respondent) spent more than 45 minutes, and the rest (2.1 per cent) indicated that they did not know (Table F8).

In an item intended to find out how often people visited Al-Medina, respondents were asked to indicate the frequency of their visits. Less than half of the respondents (44.8 per cent) reported that they were visiting, Al-Medina for the first time; 19.7 per cent indicated the second time; 5.9 per cent indicated the third time; and 29.6 per cent reported that they had visited the city more than three times before (Table F10). When the respondents were classified according to the geographical regions in which they lived the data demonstrate that residents of some regions visited Al-Medina more often than others. For example, residents of Saudi Arabia came in the first place in terms of the number of their visits to Al-Medina; residents of the non-Arab countries of Africa came second, while residents of the non-Arab countries of Asia were in last place. According to Table G2 the respondents who visited Al-Medina for the first time comprised 17.0 per cent of those who were residents of Saudi Arabia, as compared with 51.7 per cent of those from the Arab countries of Asia, 76.7 per cent of those from the non-Arab countries of Asia, 38.9 per cent of those from the Arab countries of Africa, 35.7 per cent from the non-Arab countries of Africa, and 57.1 per cent of the respondents from Europe, North and South America, and Australia. On the other hand, those who had visited Al-Medina more than three times before were 53.2 per cent of the people who came from within Saudi Arabia, in contrast to 25.0 per cent of those who came from the Arab countries of Asia, 6.7 per cent of those who came from non-Arab countries of

Asia, 30.6 per cent of the respondents who came from the Arab countries of Africa, 35.7 per cent of the respondents who came from non-Arabic countries of Africa, and 14.3 per cent of those who came from Europe, North and South America, and Australia.

The respondents who had visited Al-Medina before (55.2 per cent of the sample) were then requested to indicate when their first visit had taken place. According to the data, presented in Table F11, 7.4 per cent of them had visited the city for the first time in the same year in which the survey was carried out; 13.0 per cent indicated the previous year or the year before that; 30.6 per cent indicated between 3 and 5 years ago; 35.2 per cent indicated between 6 and 16 years ago; and 13.9 per cent had visited the city for the first time 16 years or more, before.

In an item aimed to find out how long the visitors usually stay in Al-Medina during the season of pilgrimage, respondents were asked to indicate how many days they intended to stay in the city. In response, 3.9 per cent indicated one day; 10.8 per cent indicated two or three days; 56.9 per cent reported that they intended to stay four to nine days; 23.0 per cent indicated ten to twenty days and the rest (5.4 per cent) reported that they would stay for a period of more than twenty days in the city (Table F32).

Regarding the contribution of pilgrimage to the economic life of the city, respondents were asked two questions about their expenditures. In the first, they were requested to indicate how much they intended to spend on the purchase of gifts and souvenirs from Al-Medina. In response, only 9.9 per cent indicated that they would spend less than 100 SR.; 15.8 per cent indicated from 100 up to 299 SR.; 24.6 per cent indicated from 300 up to 699 SR.; 19.7

per cent indicated from 700 up to 1499 SR. and the rest (30.0 per cent) reported that they intended to spend 1500 SR. or more (Table F39).

The second question, however, dealt with the amount of money spent on other things (accommodation, transport, food, ... etc.) per day in Al-Medina. The respondents who were responsible for others were asked to indicate how much they spent per person per day. Replies, as shown in Table F40, revealed that 44.1 per cent of the respondents spent less than 60 SR. per day; 20.3 per cent spent from 60 up to 99 SR.; 20.8 per cent spent from 100 up to 199 SR.; 7.4 per cent spent from 200 up to 399 SR. and the same number (7.4 per cent) spent 400 SR. or more per day.

In an item designed to elicit the difference between the daily prayers in terms of the visitors' attendance in the Haram, the respondents were asked to indicate what daily prayers they had observed with the Imām (the one who leads the prayer) of the Haram on the day before the one in which they filled in the questionnaire. In addition to the list of the five daily prayers, a box was provided to be ticked by those who had not attended any of the prayers in the Mosque in that day. In response, 80.4 per cent of the sample reported that they attended the Fajr (dawn) prayer; 79.9 per cent observed the Zuhur (midday) prayer; 76.0 per cent observed the Asur (afternoon) prayer; 82.4 per cent attended the Maghrib (sunset) prayer; 82.4 per cent attended the 'Ishā' (evening) prayer and only 6.9 per cent indicated that they did not observe any of the above prayers with the Imām of the Haram on that day (Tables F33 to 38).

So, both Maghrib and 'Ishā' prayers were attended by the

largest number of visitors, Fajr prayer came in the second place and Zuhur prayer was in the third place in terms of people's attendance, while Asur prayer was the least observed with the Imām of the Haram by the visitors. The fact that the Zuhur and Asur prayers were the least performed with Imām can be attributed to several factors. Firstly, the weather: during the months of July, August and September, in which the survey was carried out, the temperature, sometimes, rises to over 45C° in Al-Medina.

Secondly, the Haram and the temporary shaded areas around it are not large enough to accommodate the demands of the people for prayer places. Thirdly, the city in general, lacks shaded pedestrian walk-ways. The fact that less people attended the Asur prayer than the Zuhur can be explained by the fact that the large open area around the Haram, used for prayer in the season of pilgrimage, is covered with marble or asphalt and exposed to direct solar radiation. It absorbs the sun's heat during the morning then starts to re-radiate it back to the environment in the afternoon.

Unless one finds a shaded place, this heat coming from the ground and direct sun radiation make observing the Asur prayer (usually at 4 p.m.) in that area more difficult than observing the Zuhur prayer (usually at 12.30 p.m.) along with the Imām of the Mosque.

Cross-tabulation between gender and attendance at prayers reveals that females observe prayers with the Imām of the Haram less frequently than do males. This can be explained by the fact that females are exempted from performing the prayers while they have their monthly period. Also, because of the crowds, females may experience more difficulties in observing the prayers in the Haram than do males. According to Table G3, for example, 82.9 per cent

of the male, in contrast to 65.5 per cent of the female respondents observed the Fadjur prayer with the Imām of the Haram.

Now we turn to a set of items dealing with demographic characteristics of the respondents. With regard to a question concerned with age, 19.0 per cent of the sample indicated that they were over 17 to 27 years old; 32.7 per cent were over 27 to 37 years old; 25.4 per cent were over 37 to 47 years old; 12.2 per cent were over 47 to 57 years old; 10.2 per cent were over 57 to 67 years old; and only 0.5 per cent were over 67 years old (Table F27). Regarding marital status, most of the respondents (89.6 per cent) reported that they were married; 9.0 per cent were single; and widowed and divorced constituted only 1.5 per cent of the sample (Table F29).

Regarding the answers to a question dealing with occupation, 19.2 per cent of the sample reported that they were self-employed; 60.1 per cent employed; 1.5 per cent unemployed; 5.4 per cent retired; 5.9 per cent students and 7.9 per cent were housewives (Table F30). With reference to the level of education, the data show that 3.5 per cent of the respondents could not read nor write; 9.4 per cent could read and write; 3.5 per cent completed primary education; 13.4 per cent completed intermediate school or its equivalent; 30.7 per cent completed secondary school or its equivalent; 26.7 per cent held a bachelor degree or its equivalent; and 12.9 per cent attained higher academic qualifications (Table F31).

Before we proceed to the attitudes questions it should be mentioned that, as with the analysis of the residents' survey, age groups and level of education values will be regrouped in order

to reduce the number of classes for the variables, for simplifying the analysis. Age of the respondent will be regrouped to: over 17 to 37 years; over 37 to 57 years; and over 57 years. For brevity, respondents in these age groups will be referred to as young, middle-aged and old respectively. Correspondingly, the respondents will be regrouped according to their level of education into three categories: those who did not complete primary school education; holders of primary or intermediate school certificates or their equivalent; those who attained a secondary school certificate or its equivalent or a higher qualification. They will be referred to as: low, middle, and high education groups respectively.

The first attitude question the respondents were requested to answer aimed to elicit the visitors' opinions regarding the distance between their accommodation and the Haram. The question comes immediately after the one asking about the distances, in metres and kilometres, between the respondents' accommodation and the Mosque. It reads, "Do you consider your accommodation near or far from the Haram?" They were given three alternative options: near to the Haram, far from it, or in between. Responses revealed that a large number (74.4 per cent) of the respondents considered their accommodation near to the Haram; only 5.4 per cent considered it far from it; and the rest (20.2 per cent) regarded their accommodation as located somewhere in between (Table F5).

When the locations of the accommodation of the respondents were grouped according to their actual distance from the Haram, as shown in Table G4 and Fig. 7.1, the responses to the question indicated that nearly all (96.7 per cent) of the respondents who

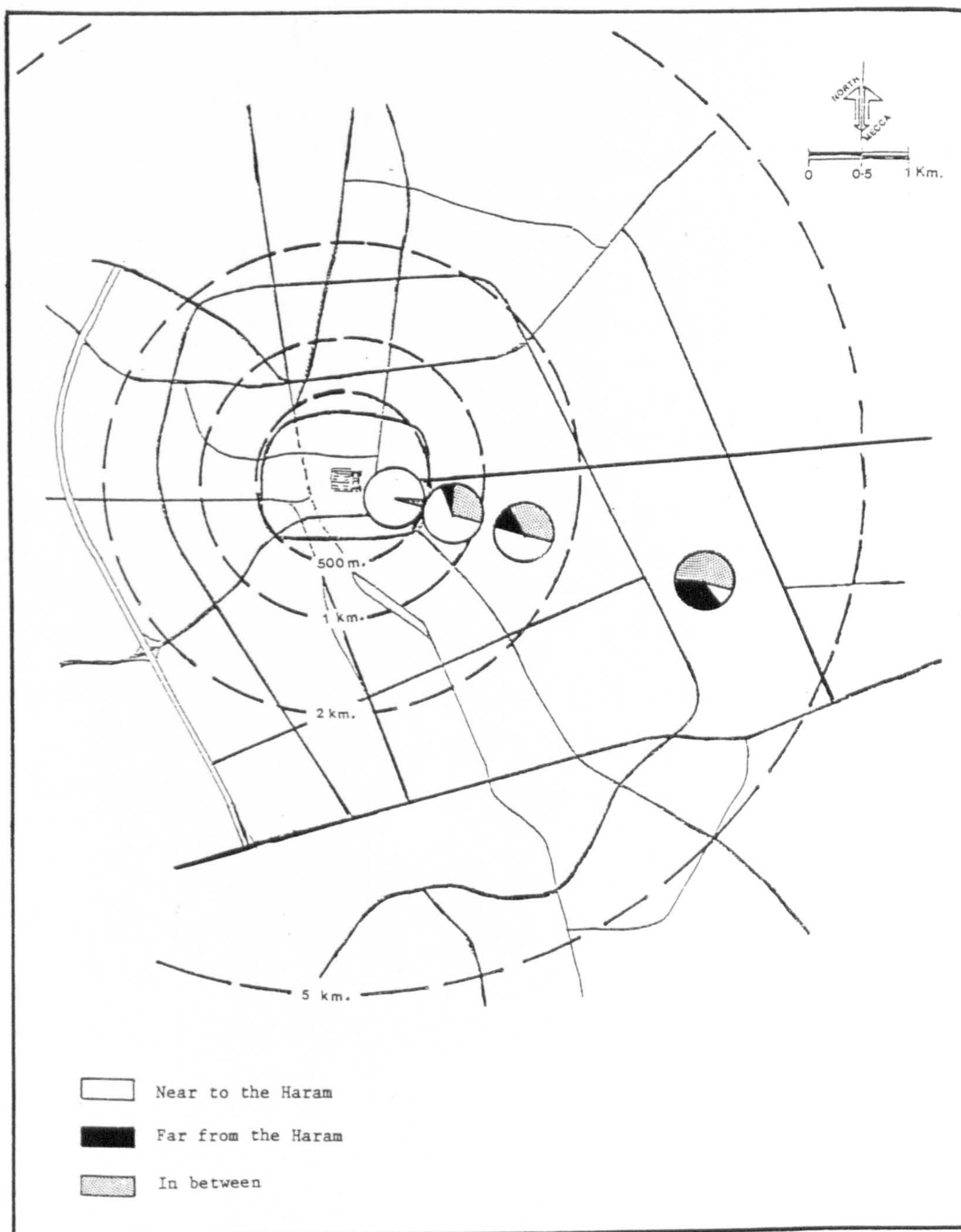


Fig. 7.1 The relationship between the distances between the visitors' accommodations and the Haram, and whether they consider them were near or far from it.

lived at less than 500 metres distance from the Haram, in contrast to 66.2 per cent of those who lived at a distance between 500 metres and one kilometre, 50.0 per cent of those who lived between one and two kilometres, and only 9.1 per cent of those who lived at a distance between two and five kilometres from the Haram, considered their accommodation was near to the Mosque. On the other hand, none of the respondents who lived at less than 500 metres distance from the Haram as compared with 5.2 per cent of those who lived between 500 metres and one kilometre, 13.6 per cent of those who resided between one and two kilometres, and 36.4 per cent of those lived at a distance between two and five kilometres from the Haram, regarded their accommodations as being far from it. Those who considered their place of residence as located somewhere in between (neither far from the Haram nor near to it) were 3.3 per cent of those who lived at less than 500 metres distance from the Haram; 28.6 per cent of those who resided between 500 metres and one kilometre; 36.4 per cent of those who dwelled between one and two kilometres; and 54.5 per cent of the respondents whose accommodation was located at a distance between two and five kilometres from the Mosque.

In an item dealing with whether or not the visitors encountered difficulties in finding their way to the Haram, respondents were asked, "Do you think it is easy for visitors to find their way to the Haram, or is it difficult?" Responses proved that a large number of the visitors experienced difficulties in finding their way to the Mosque. As shown in Table F9, 67.2 per cent of the respondents indicated that it was difficult, while the rest (32.8 per cent) reported that it was easy.

In order to elicit the visitors' perception of change regarding the city, the respondents who were not visiting Al-Medina for the first time (112 respondents) were asked, "Did you like Al-Medina more or less now compared with your first visit?" Most of them 94.5 per cent) reported that they liked it more now (Table F12). Regarding new development, the same group of respondents were asked, "Do you think the recent developments in the central area of Al-Medina have contributed to the spiritual nature of the city or not?" A large number (73.1 per cent) indicated that they have contributed (Table F13).

In an item designed to measure to what extent the city met the people's expectations, all the respondents were asked, "One usually has an imaginary picture of important places before he has been to them. Do you find Al-Medina similar to the picture which you had in your mind before your arrival on the first occasion, or is it different?" The responses show that the majority of the visitors found a discrepancy between what they had in their minds about the city and how they found it. As shown in Table F14, only 34.0 per cent of the respondents reported that Al-Medina looked as they imagined it, while the rest (66.0 per cent) thought that it was different. When the respondents were classified according to their level of education patterns of the responses demonstrate that there is a consistent tendency: as educational level rises, the proportion of people who found the city as they imagined decreases. According to Table G5, 52.0 per cent of the low educated respondents, as compared with 38.7 per cent of the middle educated and only 29.6 per cent of the higher educated, reported that they found the city as they imagined.

In following up the issue, the respondents who indicated that the city was different were then asked which they thought the best - the imaginary picture or the actual city? The data show that slightly more than half (50.4 per cent) of them thought that the imaginary picture was better (Table F15). Cross-tabulation between the responses and level of education show that the middle and higher educated people were more likely to think that the imaginary picture was better than were the lower educated. As shown in Table G6, 33.3 per cent of the lower educated, in contrast to 55.6 per cent of the middle educated and 51.6 per cent of the higher educated, indicated that the imaginary picture was better.

In another question intended to ascertain the visitors' expectations regarding the appearance of the city, all the respondents were asked, "Before your arrival in Al-Medina, did you expect the city to look more historical or more modern?" They were given three choices: more historical, more modern, and as it looks now. The responses demonstrate that the majority of the people expected Al-Medina to look more historical. According to Table F16, 73.6 per cent of the respondents reported that before they arrived in the city they expected it to look more historical than it was; 17.9 per cent expected it to be more modern, while the rest (only 8.5 per cent) expected it to be as it looked at the time of the survey. Differences in age and educational level of the respondents had little effect. For example, 77.5 per cent of the young expected the city to look more historical, as did 68.8 per cent of the middle-aged and 72.7 per cent of the old people (see Table G7).

Regarding the general character of the city the respondents

were asked, "Apart from the existence of the Haram, how do you feel when you are walking or driving in the city centre?" Three alternative replies to the question were given: "I feel that I am: in a Western city; in a modern Middle Eastern city; in a historical Islamic city." In response, only 9.4 per cent felt that they were in a Western city; 37.6 per cent felt that they were in a modern Middle Eastern city and slightly more than half of the sample (53.0 per cent) felt that they were in a historical Islamic city (Table F17). Cross-tabulation between the respondents' answers and their age reveals that there is a consistent tendency (although the differences are not very large): the older the individual, the more likely the feeling of being in a historical Islamic city. As can be seen in Table G8, 50.5 per cent of the young indicated that they felt they were in a historical Islamic city, so did 53.3 per cent of the middle-aged, and 63.6 per cent of the old people. However, classification of the respondents according to their level of education, revealed that those with higher education were the least likely to feel that they were in a historical Islamic city. As presented in Table G9, of those with a higher education, 47.9 per cent reported that they felt they were in a historical Islamic city, in contrast to 70.6 per cent of those with middle education, and 56.0 per cent of those with low education.

With reference to the city's identity, the respondents were asked, "Apart from the existence of the Haram, do the buildings, the streets and the shops make you feel that you are in Al-Medina, or not?" In response, 61.0 per cent of the sample indicated that these elements made them feel that they were in Al-Medina, while the rest (39.0 per cent) reported that they did not (Table F18).

Differences in age had little effect on people's responses. As shown in Table G10, 57.7 per cent of the young reported that they made them feel they were in Al-Medina, as did 67.6 per cent of the middle-aged and 54.5 per cent of the old people. The variations in responses depended, instead, upon the level of education. The higher educated people were the most likely to be critical about the shortcoming of these elements in terms of their contribution to the identity of the city. As presented in Table G11, 49.3 per cent of the higher educated people, as compared with 14.7 per cent of the middle educated and 13.0 per cent of the lower educated, indicated that buildings, streets and shops did not make them feel they were in Al-Medina.

Then, in an item designed to elicit visitors' attitudes towards high-rise structures, the respondents were asked to indicate whether they were in favour of or opposed to high-rise buildings in the central area of Al-Medina. In response, 57.9 per cent indicated they were in favour (Table F19). Similarly to the previous question, age had little effect on the people's attitude. According to Table G12, 56.3 per cent of the young were in favour of high-rise buildings, so were 61.0 per cent of the middle-aged and 54.5 per cent of the old respondents. Once again, variations occurred between the respondents who had different levels of education. The data show that the more educated the individual, the more likely the opposition to high-rise buildings. As can be seen from Table G13, 20.0 per cent of the lower educated, as compared with 29.4 per cent of the middle educated and 50.0 per cent of those with higher education, opposed high-rise buildings in the central area.

After that, the respondents were asked about their attitude regarding building bridges in Al-Medina. In particular, they were requested to indicate whether they thought that it was appropriate for bridges to be built in the central area, or not. Replies revealed that the majority of the visitors approved building bridges - 81.4 per cent of the respondents indicated that it was appropriate (Table F20). Again, age was unlikely to influence people's responses. As shown in Table G14, 81.0 per cent of the young approved building bridges, as did 80.5 per cent of the middle-aged and 86.4 per cent of the old people. On the other hand, the more educated the respondent the more likely the opposition to bridges. According to Table G15, only 3.8 per cent of the lower educated, in contrast to 14.7 per cent of the middle educated and 22.7 per cent of the high-educated visitors, disapproved building bridges.

Comparison between the responses to this question and the one dealing with high-rise buildings demonstrate that, as in the case of the residents' survey, the visitors opposed constructing high-rise buildings much more than they opposed building bridges (42.1 versus 18.6).

Then, in a series of items dealing with services and other environmental aspects of Al-Medina, respondents were requested to indicate whether they were satisfied or dissatisfied with each of them. They were introduced by the following passage: "The following are about services and some aspects of Al-Medina. For the purpose of this study, it is important to know whether you are personally satisfied or dissatisfied with each of them, please tick the box which fits your opinion."

The series started with an item designed to measure the

visitors' satisfaction regarding the availability of places for prayer in the Haram. The answers revealed that a large number of the visitors were satisfied, as reported by 61.0 per cent of the sample (Table F21). This suggests that the people's responses were influenced by the fact that work on the construction of the enlargement of the Haram was going on during the time of the survey. As such, the high percentage of those who reported that they were satisfied does not imply that a large number of the people found places for prayer in the Mosque easily.

With reference to an item dealing with accommodation, 70.8 per cent of the sample reported that they were satisfied (see Table F22). Differences in age and level of education had little effect on the responses. For example, 72.1 per cent of the young, as compared with 65.8 per cent of the middle-aged and 81.8 per cent of the old people, indicated that they were satisfied (see Table G16). Again, the majority of the respondents (78.4 per cent) reported that they were satisfied with the transport within the city (see Table F23). Similarly, age and level of education had little effect on people's attitudes. For instance, 82.6 per cent of those with low education reported that they were satisfied, as did 90.6 per cent of the middle educated and 74.3 per cent of the high-educated (see Table G17).

Responses to an item dealing with shopping facilities and restaurants revealed that 59.6 per cent of the respondents were satisfied (Table F24). Cross-tabulation between people's responses and their age indicated that they were unlikely to be related. As shown in Table G18, 60.4 per cent of the young reported that they were satisfied, as did 58.7 per cent of the middle-aged and 59.1 per

cent of the old people. On the other hand, classification of the respondents according to their level of education demonstrates that the lower educated people were the most likely to be satisfied. As can be seen from Table G19, 80.8 per cent of the lower educated, as compared with 54.4 per cent of the middle educated and 57.4 per cent of the higher educated respondents, indicated that they were satisfied with shopping facilities and restaurants.

The respondents were more divided regarding pedestrian walk ways than on other issues, 56.1 per cent were satisfied (see Table F25). Again, age had an insignificant effect on responses. According to Table G20, 57.3 per cent of the young were satisfied; so were 52.1 per cent of the middle-aged and 63.6 per cent of the old. However, when the respondents were grouped by educational levels, the data show that the higher educated people were the most likely to be critical about the issue. While 66.7 per cent of the lower educated and 81.3 per cent of the middle educated indicated that they were satisfied, only 49.3 per cent of the high educated did so (Table G21).

The last item in the series dealt with the appearance of the city. Replies revealed the majority of the people were satisfied, reported by 72.9 per cent of the sample (Table F26). As with the previous items age had little effect on the responses. As presented in Table G22, 69.2 per cent of the young, compared with 78.1 per cent of the middle-aged and 72.7 per cent of the old respondents, were satisfied. Again, when the respondents were classified according to their level of education, the pattern of responses indicated that the higher educated people were the least

likely to be satisfied with the appearance of the city. As shown in Table G23, nearly all (96.0 per cent) of the lower educated people, and about the same percentage (96.9 per cent) of the middle educated reported that they were satisfied, while only 63.3 per cent of the high-educated indicated so.

Similarly to the residents' survey, the last three pages or the questionnaire booklets were left blank, in which respondents were requested to write their own comments. More than half of the respondents (55.1 per cent) made comments (Table F44). When the respondents were classified according to their age and level of education, the data shows that while age had little effect, the lower educated were the least likely to comment. According to Table G24, 53.8 per cent of the young commented, so did 59.7 per cent of the middle-aged and 45.5 per cent of the old. As far as level of education is concerned, 30.8 per cent of the lower educated, in contrast to 58.8 per cent of those with middle education and 59.2 per cent of the highly educated respondents, added comments (Table G25).

The comments dealt with different issues ranging from the general character of the city to complaints about prices in some restaurants. The need for enlarging the Haram and more organization inside it came top of the list in the respondents' comments in terms of the number of the people who mentioned it. They were reported by about one third of those who made comments (thirty eight out of one hundred and thirteen). Nineteen respondents indicated that the Mosque was too crowded to find places for performing prayers. Nine reported that they were confronted with extreme difficulties in getting access to visit the tombs of

the Prophet and the first two Caliphs, mainly because the movement of the people inside the Haram was not organized and the gates were used as exits and entrances at the same time. Eleven respondents complained about the people who were responsible for the organization in side the Haram. Some of them added further that they should be more educated in order to deal with the crowd in a more sensible manner.

Pedestrian walk-ways came in second place in the comments, mentioned by twenty eight respondents. Twenty six of them complained about the danger and disturbance caused by the mixed pedestrian and vehicular traffic in the central area. To overcome this problem, five people suggested that vehicular traffic should be kept outside the central area, at least during the pilgrimage season. Another five writers indicated that areas for pedestrian crossing should be marked in the secondary streets and tunnels should be built in the main ones. In addition, four respondents stressed the importance of shading the walk-ways. To achieve this purpose three of them recommended the planting of trees, especially palms for which Al-Medina is well known.

Conservation of the historical character of the city and its Islamic identity came in third place in the respondents comments, reported by twenty seven respondents. Thirteen of them indicated that Al-Medina was being deprived of its identity in the name of modernization, some added, to the extent that they did not have the feeling that they were in the Prophet's city. Eleven respondents emphasized the importance of conserving the historical mosques as well as the places which have a historical value. Regarding new developments, sixteen people reported that they should respect the

historical nature of the city. Fifteen respondents added further that the revival of the authentic character of the city should be given first priority in its future planning.

Accommodation came in fourth place in terms of the number of people who mentioned it in their comments. It was reported by seventeen respondents. Nine of them indicated that it was too expensive in Al-Medina. Another five reported that there were too many people sharing one room. In this consideration five respondents suggested that the Saudi government should provide appropriate accommodation specially for visitors, and should let it at a price that people can afford.

Geographic legibility of the city came in fifth place, mentioned in some way or another by fifteen respondents. Nine of them indicated that the physical role of the Haram should be emphasized by making it highly visible from any point in the city. Eight people wrote that more signposts are required to show the way to the Haram and also the other important places. Another two added that information points are vital, especially in the Haram Area, in order to help those visitors who get lost and cannot find their way back to their accommodation.

Regarding services, eleven respondents complained about the inadequacy of the ablution facilities near to the Haram Area. Another eleven respondents expressed their dissatisfaction with the restaurants. Four of them indicated that they were too expensive, while the rest were suspicious regarding standards of hygiene and the quality of food which was served. In addition, ten respondents reported that more effort should be made in cleaning the city, especially the secondary roads and narrow lanes. Shortages in car

parking spaces in the Central Area were mentioned by three respondents only. These respondents were visitors from inside the Kingdom, who usually come to the city by private cars.

On the other hand, fifteen respondents expressed their satisfaction with the level of services and the organization of the city. Some of them wrote that the city was clean and the visitors' requirements were available. Others thanked the government for its effort in providing the required facilities, and especially for the Holy Mosque enlargement, in which work was in progress at the time of the survey.

Beside these points, the comments revealed that the questionnaire was well received and dealt with as seriously as it should be by the respondents. This fact is demonstrated by the amount and character as well as the style of writing. In addition, four respondents indicated that such studies are essential for the future development of the city in order to fulfil both the physical and the spiritual need of its visitors. Furthermore, eight people expressed their thanks for giving them a chance to take part in the survey and to write their own impressions.

Finally, this section cannot be completed without citation of some of the respondents comments. For example a man in the 27 to 37 years age group in employment in Nigeria wrote:

- "1. There is the need to preserve some of the Islamic historical monuments. Modernization is okay but not at the risk of destroying those artefacts that visiting Moslems would wish to see in their authentic state.
2. The control of human traffic at the Al-Haram and some of the historical places in Medina is poor. This often results in pushing and other unruly behaviour by pilgrims. The erection of aluminium barriers to demarcate entry and exit lanes and points could help.

3. The Al-Haram although nearly dwarfed by high rise buildings, is sufficiently imposing to be recognised by first-time visitors. However there is the need for information centres to be established in strategic places outside the Mosque. For example, I could not recognize the Bab Al-Salam entrance to the Mosque. When I asked other pilgrims I was misdirected. It was not until my 3rd day in Al-Medina that I eventually found the correct entrance. Guides are sometimes of little use because of language barrier. One does not know where to get a guide except he is lucky to be accosted by one."

Another man in the 27 to 37 years age group, self-employed from Morocco, wrote:

"I would like the physical form of Al-Medina to be in line with the role that it has played through the history of Islam. Also, I wish that the historical buildings and places should remain standing in their authentic conditions witnessing what have been achieved by Muslims.

I do not want to see, however, the Western styles which have melted the urban heritage and the traditional commercial activities of the city to the extent that the visitor of the Prophet's Mosque feels that he is in a Spanish or French or any other city, which are dominated by free trade and money-making even in the expense of the feelings of other people."

Another one in the 47 to 57 years age group, employed, from Libya, commented about question number eighteen which asked, "Apart from the existence of the Haram in Al-Medina, do the buildings, the streets and shops make you feel that you are in Al-Medina or not?" He wrote:

"Because the fact that I spent most of my time in the Holy Mosque, which is the main reason for my visit, I felt that I am in Al-Medina. I had the same feeling when I am in the old area near to the Haram or while visiting some of the historical sites in the city, for example the cemetery of Al-Bakya, the Mosques of the Sahaba (companions of the Prophet) and Auhud mountain.

But, apart from these I do not see that the other urban features of the city differ in any manner from that of any middle size city located in any arid region of the Arab World."

7.2.2. Attitudinal Differences

This part is concerned with the effect of the respondents' background on their attitudes towards the environment. The detailed analysis suggests that visitors' opinions, unlike that of residents, were influenced mainly by the educational level of the respondents. Thus, the attitudinal variations among the people who were of different educational levels will be the central point of the discussion.

The analysis of the residents' survey proved that income level plays a significant role in affecting the respondents' attitudes towards some aspects of the environment. But unfortunately, such an item could not be incorporated in the visitors' questionnaire. If the respondents were asked about their income in their own countries, such information would be futile in this study, due to the fact that the standard of living varies from one country to another. In other words a family with a particular income may be classified in a high income group according to the living standards of one country and in the low income group in that of another. In addition, the respondents' expenditure in purchasing of gifts and souvenirs in Al-Medina, which the respondents were asked about, cannot be used as indicators to their income level either, since

purchasing of gifts and souvenirs depends, among other factors, on the quality as well as prices of such items in Al-Medina as compared with the respondent's own country. Also some countries give allowances for their pilgrims. For this reason the amount spent on accommodation and other things in Al-Medina can be misleading in judging a pilgrim's wealth.

The association between the respondents' opinions and their level of education varies according to the issue in question. For instance, whether visitors found Al-Medina similar to the picture which they had in their mind before their arrival, or different, was related to the level of education. As previously mentioned, the more educated the individual the less likely he/she was to find the city in reality similar to that which he/she had imagined. Again, the middle and the higher educated of those who thought that the city was different from what they had imagined, were more likely than were the lower educated, to think that the imaginary picture was better.

Regarding the general character of Al-Medina, the higher educated people were less likely to feel, when they were walking or driving in the city centre, that they were in a historical Islamic city than were the middle and lower educated people. They were, also, the most likely to be critical about the deficiency of the urban element in Al-Medina in terms of their contribution to the city's identity. They were more likely than were the lower and middle educated people to think that apart from the existence of the Haram in Al-Medina, the buildings, the streets and the shops did not make them feel that they were in Al-Medina.

In addition the data show that the more educated the visitors

the more likely their opposition to the construction of high-rise buildings and bridges in the central area.

With reference to the visitors' satisfaction with the availability of places for prayer in Haram, the data suggest that the more educated the individual the less likely the satisfaction. However, variations in level of education had little effect as far as the satisfaction or dissatisfaction with accommodation and transport within the city were concerned.

On the other hand, level of education influenced the people's responses regarding shopping facilities and restaurants. The lower educated were more likely than were the middle and high educated people to be satisfied. Those with higher education were the least likely to be satisfied either with the pedestrian walk ways or with the appearance of the city in general.

NOTES AND REFERENCES

1. Directorate General of Passports, Pilgrims Statistics for 1406 A.H. 1986 A.C., Ministry of Interior, Riyadh, 1986
2. See Group of Arab Consultants for Development and Reconstruction, Project No.22, Ministry of Municipal and Rural Affairs, Riyadh, 1980, Report No. 5, vo. 1, Part -B.

CHAPTER EIGHT:

CRITICAL DISCUSSION OF THE SURVEYS' METHODOLOGY

This chapter is assigned to a critical discussion of the surveys' methodologies and how far the surveys met the aim of the study. Constraints as well as alternatives to the methods that were used will be identified.

The chapter consists of three main sections: the first assesses the methods of data collection; the second deals with the contents of the surveys, while the third section is devoted to the sampling techniques and methods of management.

8.1. METHODS OF DATA COLLECTION

The results of the surveys showed that the self-reported questionnaire was an appropriate tool for this study. This was discussed earlier (Chapter Five). One of its advantages which is worth mentioning again is that the respondents could be fully assured of their anonymity. This view is reinforced by comparing the residents' responses to the attitude questions in this study (see Chapter Six) and their responses to the only attitude item in the socioeconomic sample survey which was carried out through interviewing by the Group of Arab Consultants for Development and Reconstruction in 1978. That item dealt with residents' attitudes toward their environment. They were asked whether they had any complaints and of what nature. In response, most of the heads of

households in Al-Medina (85.2 per cent) stated no complaints, while the rest (only 14.8 per cent) complained about the unsatisfactory conditions of their dwelling units (7.0 per cent), noise (5.6 per cent), their neighbourhood conditions (1.32 per cent), and both noise and neighbourhood conditions (0.76 per cent) [1].

Regarding the construction of the questionnaires, the fixed-alternative format, which was mainly used in the study, is pertinent in asking about attitudes for the reasons given in Section 5.2. Following up these items with supplementary open-ended questions, used with some items of the residents' survey, is advantageous when the reasons behind, an explanation, or elaboration of the initial response is needed.

However, if the open-ended questions had been used in asking about some of the factual aspects of the respondents, and if it could have been guaranteed that the responses would be given in a form that would be usable in the analysis, such questions would have given more precise information, for example, about age, household income, car ownership, length of stay in the city and expenditure. Such free answers would have allowed the use of other statistical measures for summarizing the data, for instance the mode, the median, the mean and standard deviation. These might have served in comparing the results of these surveys with others, and they might have interested other research workers, but for the purposes of this study such details are not so important.

8.2 CONTENTS OF THE SURVEYS

The surveys were put on trial before the start of the full-scale study, in the pre-testing stage. After the pre-tests had been carried out, the necessary changes in the contents of the surveys were made (see Section 5.4). As a further precaution, the respondents to both surveys were encouraged to add comments. In the three blank pages in the questionnaires' booklets they were asked to express their own views regarding the development of the city and other things they thought were important.

The comments, on the one hand, confirmed the importance of the issues that were embodied in the questionnaire. They also emphasised the importance of some aspects of the city more than others, which may serve in establishing the first priorities in city's future development. On the other-hand, with respect to the characteristics under study, the comments did not put forward new ideas that had not been initially raised in the contents of the questionnaire.

These facts, conjointly with the findings, may suggest that the contents of the survey were efficient in meeting the aims of the study.

8.3 SAMPLING TECHNIQUES AND METHODS OF MANAGEMENT

Sampling techniques and methods of management of any sociological survey can be determined by answering three main questions: What items of information are available about the

potential respondents to the survey? What are the appropriate means for getting access to the respondents? What are the resources allocated to these?

In the case of the residents' survey, as far as the first question is concerned, there were no reliable census data or records of the city's population from which names and addresses of the people eligible to take part in the survey could be known. Regarding accessibility to the respondents, the postal services in Al-Medina are not efficient enough to be used in this study, mainly because addresses in the city are not organized and the streets are not properly named. In addition, delivering the questionnaire directly to the respondents' houses and collecting them back after completion would have destroyed the anonymity of the respondents, which was very critical to the study as mentioned earlier.

For these reasons, and because of limitation on resources, the two-stage survey through intermediate girls' schools was the sensible answer. Unless a profound change takes place regarding solutions to these three problems (i.e. unless reliable data about the residents of the city are produced, the postal system is improved and better resources for carrying out the survey are granted) alternatives to the procedure that was adopted are limited.

As to the visitors' survey, there were relatively more data available about the survey's population than was the case with the residents' survey, as far as sampling is concerned. Overseas visitors were recently registered, only during the pilgrimage season, by their adilā' (visitors' guides) and some by their Pilgrimage Missions. In addition, hotels, guest houses, and furnished flats usually keep records of their occupants. The

samples of visitors from the countries concerned could be taken directly from their adilā' or Pilgrimage Missions records instead of the two-stage sampling (selecting a sample of buildings first, and then a sample of the occupants from the bulidings) which was adopted in the study (see Section 5.3.2). But this would have required more effort in the fieldwork because the respondents would be scattered in a larger number of buildings all over the city, and this would have demanded more commuting, and contact with more organizations and individuals to get access to them.

Regarding accessibility, the method that was used in the survey (in which the questionnaires were handed to the respondents directly or through receptionists or the persons in charge of their accommodations) was the most effective way, mainly because of the time constraint. The duration of the visitors' stay in the city ranges from several hours to a few weeks. Thus, one has to seek the fastest possible way to get access to them.

In spite of the limitations on options which could be employed in the sampling and management of the surveys, those adopted met the aims of the study. Geographical division of the city into neighbourhoods on the basis of the socio-economic characteristics of the population, and the stratification of the population according to sex and age enhanced the residents' survey sample. They ensured that people in the different socio-economic classes, sex, and age groups were sufficiently represented. In addition, using school students for delivering and collecting the questionnaires from the respondents, together with the other advantages which were discussed earlier, contributed towards achieving the high response rate to the survey (92.0 per cent),

which might not have been attained otherwise.

Successive classification of the visitors according to the geographical regions which they came from, guaranteed that visitors from different backgrounds were included in the sample. It served also to reduce the number of languages in which the survey was carried out. In addition, stratification of the samples from the selected countries according to sex aimed to ensure that sufficient numbers of both males and females were represented in the main sample.

However, if the size of the samples had been larger, a more sophisticated statistical analysis of the results of the surveys would have been possible - for instance, ^tmultivariate analysis and chi-square technique in studying the association between the respondents' attitudes and their backgrounds [2]. In addition, it is a fact that, regardless of the sampling technique, the larger the sample size of a survey the greater the precision of the findings. Yet in these surveys, the precision of the estimates as measured by the sampling error that was introduced by the sizes of the samples could not be evaluated. This is due to the fact that combinations of probability and nonprobability sampling techniques were employed.

NOTES AND REFERENCES

1. Group of Arab Consultants for Development and Reconstruction, Project No. 22, Ministry of Municipal and Rural Affairs, Deputy Ministry of Town Planning, Riyadh, 1980, Report No. 5, V.1, p.76.

2. For the procedure and application of multivariate analysis, see Lazarsfeld, Paul F., "Interpretation of Statistical Relations As a Research Operation", in Lazarsfeld, Paul F., and Rosenberg, Morris, (eds.), The Language of Social Research : A Reader in the Methodology of Social Research, The Free Press, New York and Collier-Macmillan Limited, London, 1966.

For calculation and application of chi-square techniques see for example:

- Robson, Colin, Experiment, Design and Statistics in Psychology, Penguin Books, 1983, pp.94-117.
- Caswell, Fred, Success in Statistics, John Murray, London, 1982, pp.252-258.

CHAPTER NINE:

SUMMARY OF THE RESULTS OF THE SURVEYS AND A DISCUSSION OF THEIR IMPLICATION FOR PLANNING POLICY

This chapter concentrates on the findings of the behavioural and attitudinal questions of the surveys of residents and visitors, because of their direct implications on the development of Al-Medina, if the needs and aspirations of both local people and the entire Islamic community are to be met, and if the coherent and inspiring environmental character of the Holy City is to be recovered.

The surveys demonstrate that living near to the Haram is favoured by residents and visitors of Al-Medina alike. A significant number (42.4 per cent) of the respondents of the residents' survey indicated (regardless of where they lived in the city), that if they had the choice of living in the Haram Area or on the periphery, they would choose the Haram Area. In contrast only 18.8 per cent indicated the periphery, while the rest (38.8 per cent) stated somewhere in between as their choice. The majority of the visitors stayed in the area surrounding the Haram: 82.8 per cent of the sample lived within one kilometre of it. This leads to overcrowding in accommodation in the area during the season of pilgrimage, especially in the furnished flats. Almost half (46.4 per cent) of the respondents of the visitors' survey shared their rooms with more than three people, and most (82.1 per cent) of these lived in furnished flats.

The residents' attendance at prayers in the Haram varied

between the season of pilgrimage and the rest of the year. They performed both Daily and Friday prayers in the Haram less frequently in the season of pilgrimage than in the off-season. This can be explained, as indicated earlier, by the fact that the Haram and the temporary shaded areas around it are not large enough to accommodate the demands of both visitors and residents of the city for prayer places in the season of pilgrimage, also by the crowding and the poor accessibility to the area.

Shortages of shaded prayer places in the Haram was also confirmed by the visitors' survey. This is suggested by the fact that the 'Asur (afternoon) prayer (when shade is most needed) was the least observed with the Imām of the Haram. In addition, despite the fact that the construction of the new enlargement of the Haram was in progress during the time in which the survey was carried out, and the people could see it, a significant number (39.0 per cent) of the visitors reported that they were dissatisfied with the availability of places for prayer in the Mosque, in general. Furthermore, the need for enlarging the Haram and more organization inside it, were the items most frequently mentioned by visitors who wrote comments. They were reported by about one third of them (thirty eight out of one hundred and thirteen).

The survey of residents shows that the people of Al-Medina rely heavily on transport, mainly private cars, for movement within the city. An example of this is that 23.7 per cent of the residents who live within 500 metres from the Haram, and 51.8 per cent of those who dwell between 500 metres and one kilometre away from it, drive from their houses to get there for prayers.

At the same time, the survey demonstrates that the people of

Al-Medina are aware of the effect of vehicular traffic on the spirituality of their city. Most of them (84.8 per cent) think that, partly because of the mixed pedestrian and vehicular traffic, maintaining calmness and tranquility while walking to prayers is more difficult now. The survey also may suggest that the people would be willing to walk instead of driving if conditions for walking were improved. This can be illustrated by the fact that 81.0 per cent of the sample were in favour of keeping cars and car parking outside the Haram Area. Nearly all of the people (94.4 per cent) thought that shaded pedestrian walk-ways are essential for encouraging walking to the Haram instead of driving. Furthermore, most of the respondents (86.9 per cent) believed that improvement of public transport would reduce traffic congestion in the area.

The visitors, too, were concerned about conditions for pedestrians in the city. In addition to the 43.9 per cent who were dissatisfied with the pedestrian walk ways, the issue came in second place in their comments after the need for enlarging the Mosque, measured in terms of the number of people who mentioned it. It was reported by twenty-eight respondents, twenty-six of whom complained about the danger and disturbance caused by the mixed pedestrian and vehicular traffic in the central area. Four respondents stressed the importance of shading the walk-ways

These findings, together with the fact that nearly all (97.9 per cent) of the visitors generally got to the Haram for prayers on foot, demonstrate the obvious importance of pedestrianizing the Haram Area. Indeed, this would reduce the vehicular traffic volume in the city in general and would free the Haram Area in particular from it. In such an event, no more bridges would be required. A

significant number of the residents (40.3 per cent) thought that no more bridges should be built, also 18.6 per cent of the visitors were opposed to their construction in the city.

The pedestrianization scheme would also make possible the revival of the old street pattern and the traditional commercial activities which used to be around the Haram. A large proportion of the residents (71.4 per cent) thought that such an atmosphere is the most important characteristic the city lacks today. In addition, a considerable number of visitors (39.0 per cent) indicated that, apart from the existence of the Haram in the city, the buildings, the streets and the shops did not make them feel that they were in Al-Medina.

The surveys also demonstrated that the city's physical form failed to accommodate its spiritual and historical message. The physical environment, as some people see it, no longer retains the quality which remind them that they are in the Prophet's City. This feeling is vital for both visitors and residents to perform their religious duties in an appropriate and meaningful atmosphere. It makes the residents feel that they really live in the Prophet's City, and the visit is made worthwhile for those who take the trouble to come to it from different parts of the world.

One example of these symptoms is that the vast majority of the population of Al-Medina (93.1 per cent) thought that their city has changed. About half of them (48.6 per cent) believed the appearance of the city had, aside from other things, been better several years earlier than it was at the time of the survey. The majority (76.5 per cent) believed that the recent development in the Central Area had not contributed much to the spiritual and

historical nature of the city. Again 48.1 per cent thought that "One feels when he is walking or driving in some areas of Al-Medina, that he is in a different city, not Al-Medina".

In addition, about two thirds (66.0 per cent) of the visitors found the city in reality different from the imaginary picture which they had in their mind before their arrival. About half (50.4 per cent) of these people thought the imaginary picture was better. Regarding the general character of the city, the majority (73.6 per cent) of the visitors had, before their arrival, expected the city to look more historical. Moreover, only about half (53.0 per cent) of the visitors reported that, apart from the existence of the Haram, they felt when they were walking or driving in the city centre that they were in a historical Islamic city, while the rest felt that either they were in the middle Eastern (37.6 per cent) or a western city (9.4 per cent). Also, as previously mentioned, 39.0 per cent of the visitors indicated that, apart from the existence of the Haram in Al-Medina the buildings, the streets and the shops did not make them feel that they were there. Furthermore, 27.1 per cent of them were dissatisfied with the appearance of the city in general.

Thus the revival of the historical character and the Islamic identity of the city should be given first priority in its future development and planning. In addition to what has been mentioned, another step toward achieving this aim would be controlling the height and architectural styles of new building in the city in general, and the Haram Area in particular. Most of the residents (87.1 per cent) think that high-rise buildings should no longer be allowed to be constructed in the Haram Area. Again, 88.1 per cent

stated that new buildings in Al-Medina should reflect the traditional local architecture of the city. In addition, 42.1 per cent of the visitors were opposed to high-rise buildings in the Haram Area.

The fact that the proportion of visitors who were opposed to high-rise building is less than the proportion of residents may suggest, perhaps, that visitors gave more consideration to the advantage of such buildings in terms of accommodating more people near to the Haram, while the residents regarded more the negative effect of these structures on the religious and historical nature of the city. To effect a compromise between these two points of view, and revive the traditional urban fabric of the city, the compact original urban form of three to four storey buildings, which formerly characterized the city, should be considered.

In addition, the revival of the traditional urban fabric and architecture cannot be accomplished without securing the urban historical continuity of the city. This can be achieved only by conserving the remains of the historical buildings and the old quarters, together with reflecting their urban essence in both existing and new development. A large number of the residents (64.8 per cent) thought that some of the historical buildings which used to be in Zukāḵ al-Ṭayār should have been conserved. Also, eleven visitors emphasized in their comments the importance of such a scheme.

To meet the physical needs of residents and visitors of the city the improvement of services has to be taken into account. Nearly one third (29.2 per cent) of the visitors' sample were dissatisfied with accommodation; 21.6 per cent expressed the same

feeling about transport within the city; and 40.4 per cent did so regarding shopping facilities and restaurants.

Finally, the analysis of the surveys shows that the effect of the residents' background on their attitudes toward the quality of the physical environment differs from that of the visitors. The residents' opinions were influenced mainly by their level of education, age, and income level, while the visitors' attitudes were affected mainly by level of education. However, the other background variables such as sex, occupation and type of accommodation in which the respondents lived, had an insignificant effect, as far as this study is concerned.

CHAPTER 10

SUMMARY OF GENERAL CONCLUSIONS AND IMPLICATIONS

The surveys of residents and visitors demonstrate that the situation in the Holy City of Al-Medina is alarming. There was consistent agreement between residents and visitors alike that the physical environment is far short of communicating the spiritual and historical message of the area; or even of providing the physical and social support expected by both populations (see Chapter 9). This situation, as discussed in Part One of this study, is an outcome of the rapid development and modernization process which has taken place in the area since the 1370s/1950s.

The surveys also succeeded in identifying areas where urgent action should be taken to reverse these trends before it is too late. However, the results of the surveys, as far as the future planning of the city is concerned, cannot be accepted blindly. They have to be considered in conjunction with the availability of resources as well as with the constraints of the area if sensible policies towards planning and building design for the area are to be formulated

In this concluding chapter the results of the surveys will first be evaluated against the information presented in Part One of the study. Based on this, the implications of the results for planning policy and building design for the Haram Area in particular and the city in general will be revealed. Finally, areas where further research is required will be identified.

10.1. EVALUATION OF THE RESULTS OF THE SURVEYS

The severe shortages of shaded prayer places in the Haram which is suggested by both the surveys of residents and visitors will be overcome by King Fahad's extension which is under construction. As mentioned in Chapter 3, this extension will increase the capacity of the original building and the temporary canopies adjacent to it from about 100,000 to 165,000 worshippers. In addition, the possibility of using the roof of the new structure and the open area around the building, both of which could be provided with temporary canopies in the summer, would bring the total capacity of the Mosque and the areas earmarked for prayer to about 500,000 worshippers.

This number of prayer places seems to be enough to accommodate both the demands of residents and visiting pilgrims in the foreseeable future. Nevertheless, if more places should be required, building an additional floor in the Haram for extending the prayer area, as is now the case with the Great Mosque of Mecca could be considered. The residents survey shows that the further the people live from the Haram the less frequently they observe the Daily and Friday prayers there. For example, 37.1 per cent of the residents who lived less than 500 metres distance from Haram, as compared with 11.3 per cent of those who lived at more than 5 Kilometers distance from the building, observed three daily prayers or more every day there in the off-season of pilgrimage. And 53.3 per cent of those who lived less than 500 Metres distance from the Haram, in contrast to 26.4 per cent of those dwelling more than 5 kilometres away from it, performed every Friday prayer there in the off-season.

So, in the long term, as the city expands horizontally and if the population density is kept at the present level, the rate of increase of demand from residents for more prayer places in the Haram would diminish because many of the people who live on the periphery of the city would be deterred from frequent attendance at the Haram and would rather perform prayer in their local mosques.

As far as the future demand of the visiting pilgrims for prayer places is concerned however, it would seem the limitation of the physical capacity of the three areas of hadj around Mecca (Mina, 'Arafāt and Muzadalifa) is the critical point in restricting the number of pilgrims rather than the capacity of the Mosque of the Prophet at Al-Medina. The capacity of Mina, the smallest of the pilgrimage areas, and the place where pilgrims are required to stay for the longest period (three days), is the prime factor limiting the total number of annual pilgrims. The total area of Mina including the mountains is 635 hectares of which only 289 can be used for accommodation. In 1978, when the total number of pilgrims reached 1,899,420 the population density was 5,692 per hectare [1]. Thus, a quota system was recently introduced to control the number of pilgrims. A maximum number of pilgrims has been allocated to each Islamic country and which should not be exceeded. This seems to be the proper solution and is expected to continue.

For these reasons it is unlikely that any further horizontal extension of the Prophet's Mosque would be required in the future.

Now we turn to the survey's findings regarding the means for recovering the spiritual character and the identity of the city. One of the most important of these, as shown by the results of the

surveys, and which will pave the way for planning policy and building design changes in the city, is pedestrianization of the Haram Area. As indicated earlier, this covers the central part of the city which is enclosed by the First Ring Road. Pedestrianization would mean restricting the use of cars within the area, except emergency vehicles, those used by the disabled, or for deliveries to or from businesses in the area.

Improving conditions for pedestrians also requires the provision of shading to the walkways. This is essential in hot places such as Al-Medina, where the temperature reaches 46°C in the summer season. Shading can be achieved by providing the buildings along the main circulation routes with arcades, and by planting trees, especially palms, for which the city is well known. These should also extend beyond the Haram area to other parts of the city to encourage the people living further from the centre to walk instead of driving.

An efficient public transport system within the city is equally important in discouraging the use of private cars. As is suggested by the survey of residents, regular bus services between different parts of the city and the Haram would encourage many people to give up driving to the Mosque for prayer.

Pedestrianization of the Haram Area, together with improving conditions for pedestrians and efficient public transport will reduce the demand for parking spaces in and around the Haram Area.

However, underground car parks, such as the one proposed in conjunction with King Fahad's extension of the Haram, and which is planned to accommodate about 3,725 vehicles (see Section 3.3) can be allowed as long as access to them is directly via the Ring Road and

does not disturb pedestrians. If more parking spaces are required they can be provided outside the Haram Area, also, preferably, underground.

These measures will also considerably reduce vehicular traffic in the city in general and on the First Ring Road in particular. This will eliminate the need for constructing more bridges and may even eliminate the need for the existing al-Şāfya Bridge (built along the south-west of the Ring Road) which has become one of the unsightly features in the city (see Section 4.3).

Another important step towards recovering the spiritual character and the identity of the city, which is stressed by the results of the surveys, is controlling the height of buildings in the city. In this respect, it is reasonable to suggest four storeys as the maximum, which was the case in the city until the 1950s. This will revive the physical role of the Haram as the main landmark of the city, by making it both visible and visually dominant. It will function as a reminder for travellers that they are approaching the Holy City and will guide first-time visitors to the building. In addition, the Holy City in general would come closer to the image that visitors hold in their mind and expect to see on their arrival. This image is associated with viewing the domes and minarets of the Mosque, symbolizing the history and spirituality of the place. It was formerly so uniquely inspiring as to be described by almost all the people who wrote about their journeys to Al-Medina. (see Chapters 2 and 3).

This restriction of height could be applied to future development. Demolition of the existing high-rise building and constructing new four storey ones would not be acceptable on

economical grounds. However, these can be used until the time when their reconstruction becomes necessary, and by that time planning policy would restrict the height of any replacement building. This might take several decades but because of the very nature of such changes of policies and the cost involved this compromise is justifiable.

The loss of accommodation places which may result from the reduction of the maximum height of building from twelve storeys to four could be counterbalanced by the revival of the former compact form of the central area of the city. With the pedestrianization of the Haram Area and the removing of the present open car parking, either underground and to outside the area, these sites can be utilized for building accommodation for visitors and residents. In addition, restriction of the use of cars in the area will make the width of the present streets (20 to 30 metres) unnecessary. Streets can be narrowed and those which would function as main pedestrian channels could be provided with arcades on both sides. This will allow buildings along these streets to expand on the upper floors, and at the same time offer shade for pedestrians. The streets which would be used as secondary pedestrian routes, however, could be covered completely and on the second, third and ^uforth floor levels accommodation could be built.

The ground floors of the buildings in the area could be allocated for commercial uses. The specialized aswāk (markets) which were one of the distinctive characteristics of the area could be recovered by concentrating shops selling one commodity in one area: for example, aswāk of books, jewellery, perfume and incense, textiles and household equipment.

To maintain the urban historical continuity of the area and to restore the harmonious relationship between the Haram and its surroundings, the last remains of the historical quarters and buildings should be conserved. Their essence should also be identified and reflected in the whole environment while using contemporary technology in an appropriate manner and in accordance with the spirituality of the place.

Regarding the shortages in visitors' accommodation during the season of pilgrimage, and their under-utilization in the rest of the year, it seems that the most appropriate solution would be to make the best of the available facilities. As discussed in Chapter 4, Section 4.2, accommodation provided by the Islamic University and the other colleges and educational institutions for students from outside the city, could be used to accommodate pilgrims. Other buildings of these institutions as well as elementary, intermediate and secondary schools in the city could be provided with temporary basic facilities and utilised, too. School buses could be used for transporting pilgrims from their accommodation to the Haram and the other visitation sites in the city. In addition, the staff of these institutions could supervise the services required by pilgrims accommodated in their establishments.

Moreover, the residents, and particularly those who live near to the Haram, could be encouraged to release parts of their houses for accommodating pilgrims. It would be made much easier if this was considered in the design of new buildings. The Municipality of Al-Medina could make this a condition for granting a building permit for new buildings in the area.

The under-utilization of the existing facilities in the off-season of pilgrimage and the seasonal fluctuation of the city's economy in general, could be reduced by encouraging visitors from both within Saudi Arabia and abroad to undertake the 'umrah (visiting Mecca) and zyārah (visiting Al-Medina) in the off-season of hadj. As discussed earlier, this would not only stimulate the local economy in Al-Medina all year round but would also reduce the number of visitors and length of stay in the city during the pilgrimage time. Consequently, this would reduce the demand for accommodation and other services required by pilgrims in the season of hadj. People who made the zyārah would feel less bound to do it again or would stay for a shorter time when making the hadj.

To maximize the city's as well as the national income from the pilgrimage, and minimize the losses through imported goods, the local craft industries which until quite recently had been the traditional occupation of many citizens in Al-Medina, and provided the visitors with their souvenirs and gifts to take home, should be developed. This would also contribute towards maintaining living standards that have been achieved through oil revenues, and would speed up the process of diversifying sources of national income. At the present time, apart from dates, almost all the items the visitors purchase from Al-Medina to take back home, and on which more than two thirds of their money was spent in the pilgrimage of 1978, were imported (see Chapter 4).

Moreover, farms within and around the city should be protected from the threats of urban expansion, and agriculture should be encouraged. In addition to their contribution to the city's economy, they improve the urban climate and air quality,

enhance the aesthetics of the environment, and provide places of recreation.

Implementation of these recommendations requires both will and commitment from the government, and understanding from the public, which the latter has already shown in the surveys of residents and visitors in this study. The earlier the implementation is started the more effective the results and the less the cost.

10.2 SUMMARY OF THE IMPLICATIONS OF THE RESULTS FOR PLANNING POLICY AND BUILDING DESIGN

In conclusion, one may summarize the following points as guidelines to future planning policy and building design in Al-Medina.

1. After the completion of the present King Fahad's extension of the Haram, the building and the open area around it would be enough to accommodate the demands of both residents and visiting pilgrims for prayer places in the foreseeable future. If more prayer places should be required a floor could be added to the building to increase its capacity.
2. The Haram Area (the central part of the city which is enclosed by the First Ring Road) should be pedestrianized. Use of cars within this area should be restricted to emergency vehicles (fire, ambulance, police ... etc.) and those used by disabled or for deliveries connected with businesses in the area.
3. Open-air car parks should be removed from the Haram Area. Car parking may be constructed underground in this area and

- access should be directly from the First Ring Road to minimize the impact on the peaceful nature of the area. Additional parking places could be provided outside the area and these should also be underground.
4. Pedestrian walkways in the Haram Area should be shaded. Such shading may be extended to other parts of the city to encourage people to walk. Shade could be provided by building arcades along the main pedestrian channels and by planting trees, particularly palms for which the city is well known.
 5. Public transport (buses) within the city should be improved to reduce vehicular traffic.
 6. Overhead bridges should not be built in the city. If two level road junctions should be required, an underground tunnel may be built.
 7. The physical role of the Haram as the main landmark of the city should be emphasised. The maximum height of buildings in the city should be reduced to four storeys. The existing higher building may be used until the time when their reconstruction becomes necessary where upon any such reconstruction would be restricted by enforcing planning policy.
 8. The compact urban grain of the city should be revived, particularly in the Haram Area, to recover the traditional character of the area, to maintain its present accommodation capacity in the future, and also to provide shade for pedestrians.
 9. The ground floors of buildings in the Haram Area might be

- allocated for commercial uses, and the shops selling one commodity could be concentrated in one area for the revival of the traditional specialized aswāk.
10. The remains of the historical buildings and the old quarters in the city should be conserved and their essence and message should be also reflected in new developments.
 11. Existing community facilities in the city should be fully utilized in the pilgrimage season to reduce the demand for more new services for visitors. These include student accommodation and other buildings of higher educational institutions as well as elementary, intermediate and secondary schools, for accommodating visiting pilgrims. Also, school buses could be used for transporting pilgrims between their accommodation and the Haram and other religious sites.
 12. Residents should be encouraged to release parts of their houses for accommodating visitors in the pilgrimage season and this possibility should be considered in the design of new buildings.
 13. Muslims should be encouraged to visit Al-Medina in the off-season of pilgrimage in order to stimulate the city's economy all year round and also to reduce the number of visitors in the pilgrimage season.
 14. Local craft industries should be redeveloped to maximize the city's as well as the national income from pilgrimage and minimise losses through imported goods.
 15. Farms within and around the city should be protected and agriculture should be encouraged for their contribution to

both the quality of the environment and the city's economy.

16. Finally, as a general rule, any new developments should be compatible in terms of both form and function, with the spiritual character of the city, and whether they are intended to serve the local people or visitors the possibilities of their uses by both populations should be considered.

10.3 FURTHER RESEARCH

The need for further research is still open in several areas related to the development of Al-Medina. These include, especially, a detailed study of the vocabulary of the traditional local architecture and planning and their interpretation in terms appropriate to modern developments. Also, there is a need for developing appropriate design criteria for new housing and other pilgrimage-related developments and the possibilities of their uses by both visitors and local people. In addition, a study is required of the most effective ways of utilizing pilgrimage revenues in developing the city's economy. Finally, a study should be made of how best to improve the administrative system and the co-ordination between the different governmental departments in the city and to develop procedures for public participation to help decision making in areas relating to the development of the city.

NOTES AND REFERENCES

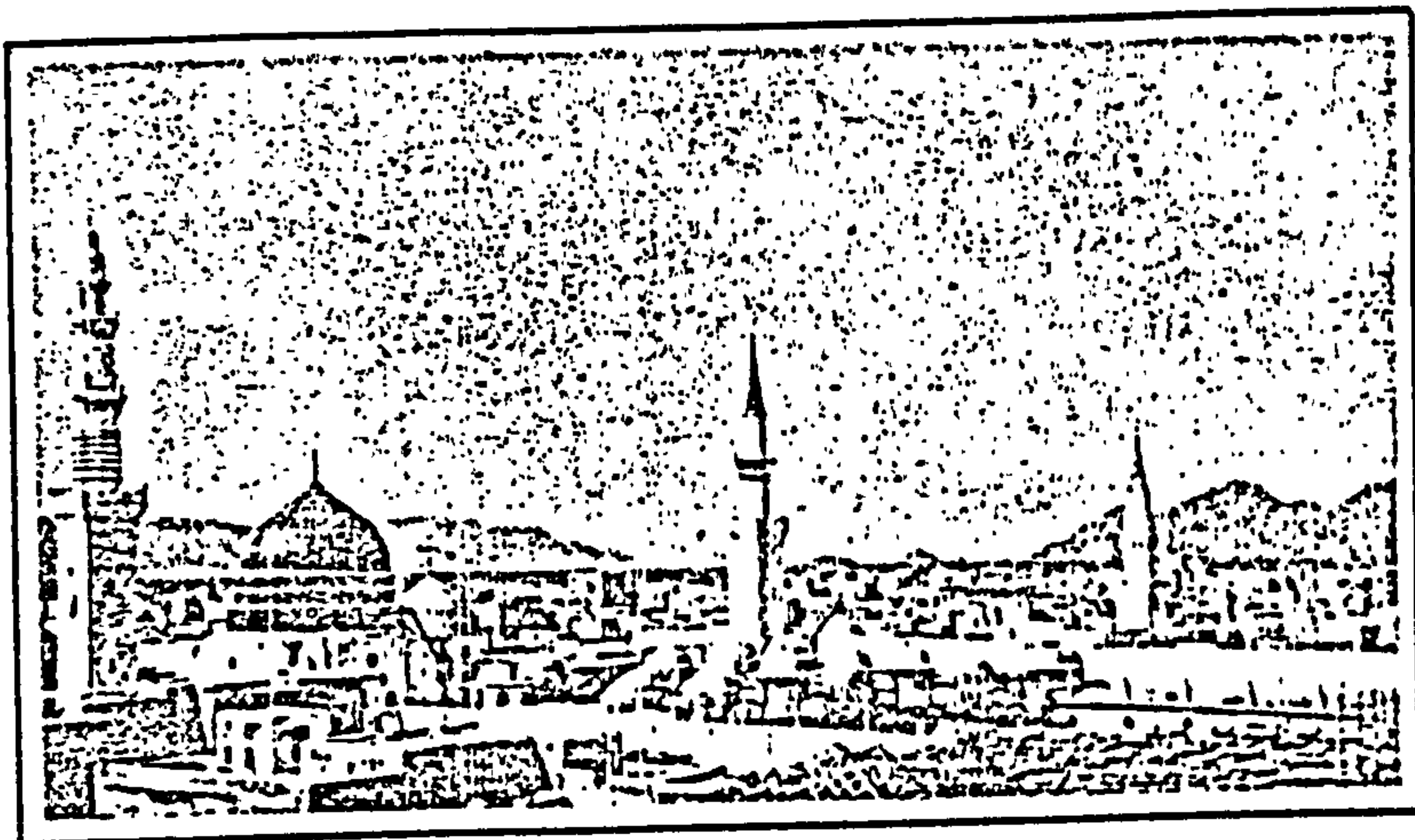
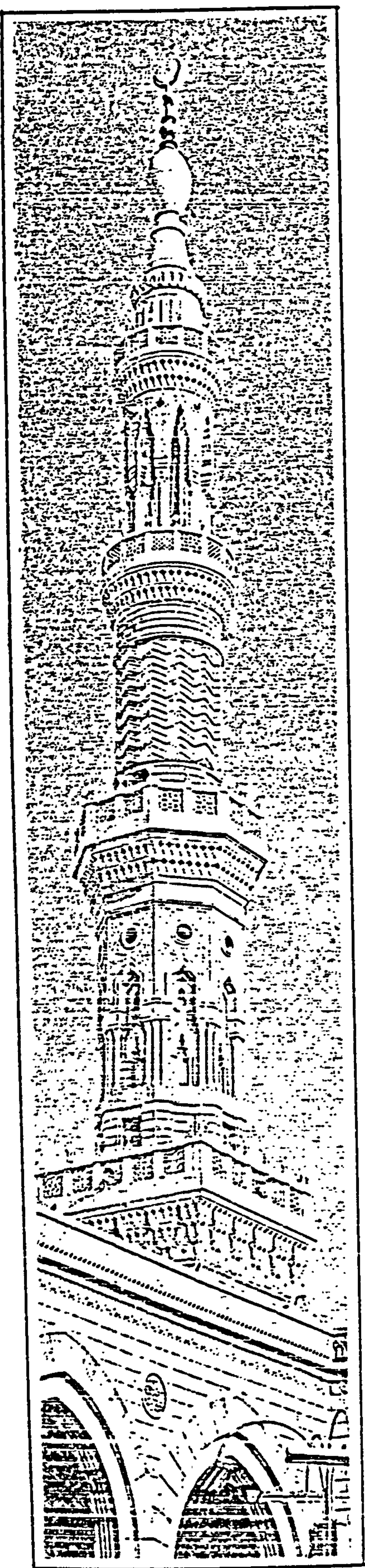
1. Ilam, H.M., Aspects of the Urban Geography of Mekka and Al-Medina, Saudi Arabia, PhD. thesis, Faculty of Social Sciences, University of Durham, Durham, 1970, p.399.

APPENDICES

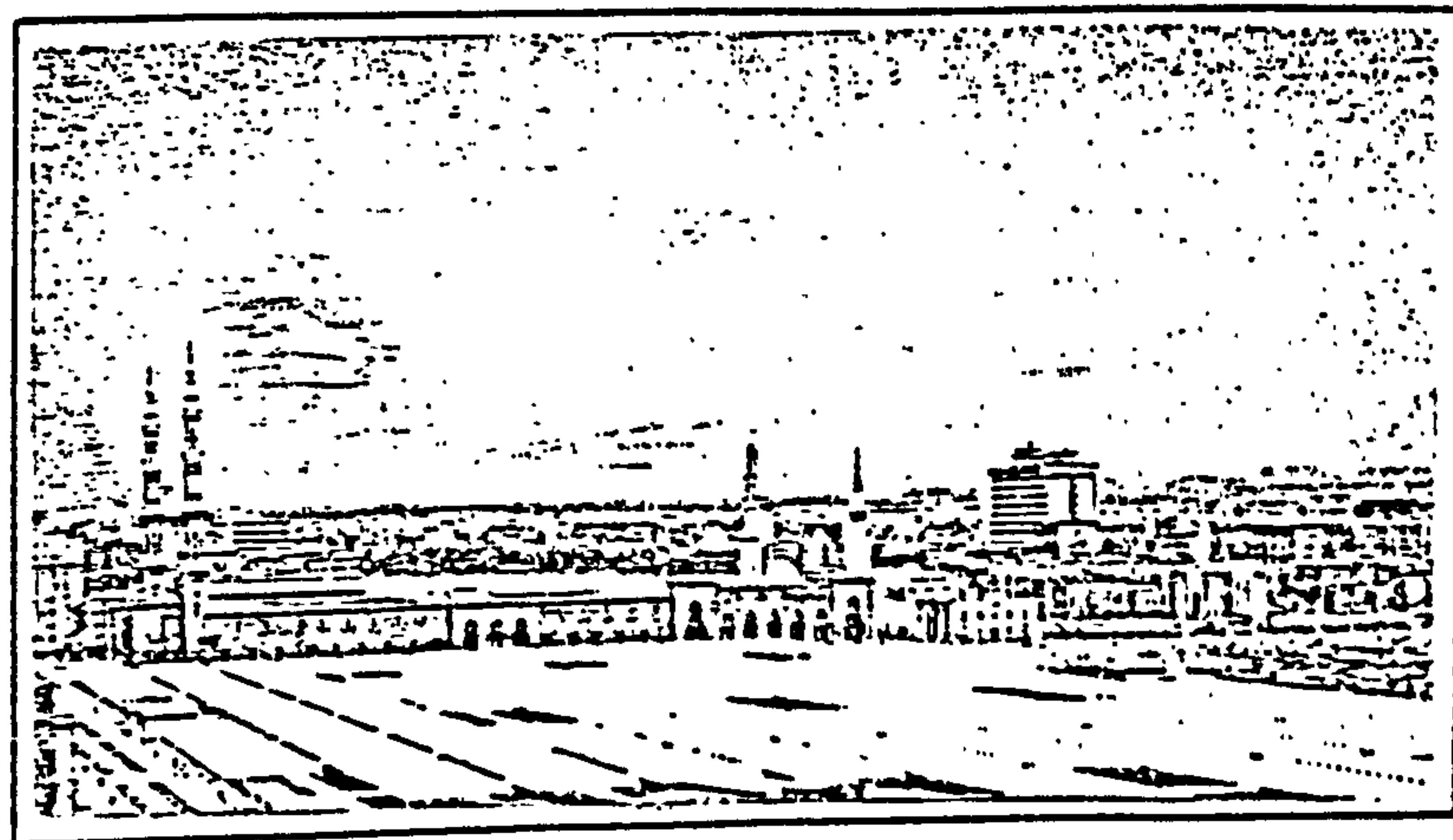
APPENDIX A

QUESTIONNAIRE OF RESIDENTS

(This questionnaire was carried out in Arabic)



RESIDENTS' QUESTIONNAIRE
AL-MEDINA
SEPTEMBER, 1986.



University of Edinburgh,
Faculty of Social Science,
Department of Architecture.

Dear Resident of Al-Medina,

This is a survey to find out a few facts about the recent development of the city of Al-Medina in general and the Haram area in particular. It is part of my Ph.D. thesis, which is devoted to the study of the relationship between the Mosque and its physical environment

This questionnaire is sent to you and to cross-section of people throughout Al-Medina to ask you to give your opinions about your city. To make sure that all points of view of men and women in different age groups are represented in the sample, the questionnaire is sent to you by a female member of your household through her school. I hope you will be willing to co-operate.

Please note that it is your own view that is wanted. If you do not read or write, you can ask a member of your family or a friend to read the question and record your answer. Your replies will be treated in complete confidence, and no individual can be identified.

The answer does not require any effort on your part other than placing a tick (✓) on the box, which best fits your answer, the figures to the right are merely an aid for the analysis of the result, please ignore them.

When you have completed the questionnaire, please seal up the answers in the provided envelope. Do not write your name or anything else on it, in order to ensure the anonymity and confidentiality of the answers. Then, send it back to the school by the same member of your family who brought it.

I hope you will find it interesting and thank you for your co-operation.

Yours faithfully,

Fahad AN-Nwisser Al-Hariqi.

(The figures between brackets to the right are merely an aid for the analysis of the results, please ignore them).

PLEASE TICK (✓) IN ONE BOX WHICH BEST FITS YOUR OWN ANSWER FOR EACH OF THE FOLLOWING QUESTIONS.

1. How long have you been living in Al-Medina?

☐ less than one year (1.1)

☐ From one year, up to 6 years (1.2)

☐ Over 6 years up to 16 years (1.3)

☐ Over 16 years (1.4)

2. How often during the off-season of pilgrimage do you observe the daily prayers in the Haram?

☐ Three prayers or more every day (2.1)

☐ One or two prayers every day (2.2)

☐ Two to six prayers a week (2.3)

☐ Two to seven prayers a month (2.4)

☐ Once a month or less (2.5)

3. How often during the off-season of pilgrimage do you observe the Friday prayer in Al-Haram?

☐ Every Friday (3.1)

☐ Once every two Fridays (3.2)

☐ Less often (3.3)

4. How often during the pilgrimage season do you observe the daily prayers in the Haram?

☐ Three prayers or more every day (4.1)

☐ One or two prayers every day (4.2)

☐ Two to six prayers a week (4.3)

☐ Two to seven prayers a month (4.4)

☐ Once a month or less (4.5)

5. How often during the pilgrimage season do you observe the Friday prayers in the Haram?

☐ Every Friday (5.1)

☐ Once every two Fridays (5.2)

☐ Less often (5.3)

6. How far is your house from the Haram?

☐ Less than 500 meters (6.1)

☐ From 500 meters to one kilometre (6.2)

☐ From 1 to 2 kilometres (6.3)

☐ From 2 to 5 kilometres (6.4)

☐ Over 5 kilometres (6.5)

7. Do you consider your house is near or far from the Haram?

☐ Near to the Haram (7.1)

☐ Far from the Haram (7.2)

☐ In between (7.3)

3.

8. If you work, how far is your work place from the Haram?
(if you are a housewife or student, do not answer this question).

☐ Less than 500 meters (8.1)

☐ From 500 meters to one kilometre (8.2)

☐ From 1 to 2 kilometres (8.3)

☐ From 2 to 5 kilometres (8.4)

☐ Over 5 kilometres (8.5)

9. Do you or does anyone else in your household have a car(s)? (count only the car(s) which is used primarily for the family transport).

☐ No car (9.1)

☐ Yes, one car (9.2)

☐ Yes, two or more (9.3)

10. How do you generally get to the Haram for the prayers?

☐ On foot (10.1)

☐ By a private car (10.2)

☐ By public transport (bus) (10.3)

☐ By a taxi (10.4)

☐ Others (10.5)

If you do not get to the Haram for the prayers by a private car, do not answer questions number 11 and 12.

11. Roughly how long does it take you travelling by a car from the Haram to get to your house after observing the Friday prayer during the off-season of pilgrimage?

- ☐ Less than 10 minutes (11.1)
- ☐ Between 10 and 20 minutes (11.2)
- ☐ Between 20 and 30 minutes (11.3)
- ☐ Between 30 and 45 minutes (11.4)
- ☐ More than 45 minutes (11.5)

12. About how long does it take you travelling by a car from the Haram to your house after observing one of the Daily prayers during the off-season of pilgrimage?

- ☐ Less than 10 minutes (12.1)
- ☐ Between 10 and 20 minutes (12.2)
- ☐ Between 20 and 30 minutes (12.3)
- ☐ Between 30 and 45 minutes (12.4)
- ☐ More than 45 minutes (12.5)

13. Regardless of where you live, if you had the choice to live in the Haram area or in the periphery of Al-Medina, what would you choose?

- ☐ In the Haram area (13.1)
- ☐ In the periphery (13.2)
- ☐ Somewhere in between (13.3)

5.

THE FOLLOWING ARE A FEW THINGS THAT SOME PEOPLE HAVE SAID ABOUT AL-MEDINA. FOR THE PURPOSE OF THIS STUDY, IT IS IMPORTANT TO KNOW WHETHER YOU PERSONALLY AGREE OR DISAGREE WITH EACH POINT OF VIEW. PLEASE TICK (✓) ONE BOX WHICH BEST FITS YOUR OWN OPINION FOR EACH STATEMENT.

14. "Al-Medina is not the city it was several years ago"

☐ Agree (14.1)

☐ Disagree (14.2)

15. "One feels when he is walking or driving in some areas of Al-Medina, that he is in a different city, not Al-Medina"

☐ Agree (15.1)

☐ Disagree (15.2)

16. "The appearance of Al-Medina aside from other things was better several years ago than it is today"

☐ Agree (16.1)

☐ Disagree (16.2)

17. "The recent development in the central area of Al-Medina have not contributed much to the spiritual nature of the city"

☐ Agree (17.1)

☐ Disagree (17.2)

18. "High-rise buildings should no longer be allowed to be built in the Haram area"

☐ Agree (18.1)

☐ Disagree (18.2)

19. "New buildings in Al-Medina should reflect the traditional local architectural character of the city"

☐ Agree (19.1)

☐ Disagree (19.2)

20. "It is easier now for the visitors of Al-Medina to find their way to the Haram than several years ago"

☐ Agree (20.1)

☐ Disagree (20.2)

21. "Bridges have created more traffic problems in the central area of Al-Medina than have been solved"

☐ Agree (21.1)

☐ Disagree (21.2)

22. "Apart from other things, bridges do not fit in with the spiritual and historical nature of Al-Medina"

☐ Agree (22.1)

☐ Disagree (22.2)

23. "Bridges should not be built any more in the Central Area of Al-Medina"

☐ Agree (23.1)

☐ Disagree (23.2)

24. "Because of the mixed pedestrian and vehicular traffic in the Central Area and other environmental factors, it is more difficult now for one to maintain calmness and tranquility while walking to the Haram for observing prayers than in the past.

☐ Agree (24.1)

☐ Disagree (24.2)

25. "All cars and car-parking should be kept outside the Haram Area, except those used by the residents of the area and for emergencies.

☐ Agree (25.1)

☐ Disagree (25.2)

26. "Shaded pedestrian walk-ways are essential for encouraging people to walk to the Haram instead of driving"

☐ Agree (26.1)

☐ Disagree (26.2)

27. "Improvement of public transport (buses) will reduce the traffic congestion in the Central Area"

☐ Agree (27.1)

☐ Disagree (27.2)

28. "The old streets pattern and the traditional commercial activities around the Haram are the most important characteristics which Al-Medina lacks today"

☐ Agree (28.1)

☐ Disagree (28.2)

29. "Some of the historical buildings which used to be in Zukāk Al-Tayar had to be conserved"

☐ Agree (29.1)

☐ Disagree (29.2)

Why? _____

30. "Bab Al-Madīdī is an important historical area and has to be conserved"

☐ Agree (30.1)

☐ Disagree (30.2)

Why? _____

31. "Al-Aghwāt's quarter was an important historical area and had to be conserved"

☐ Agree (31.1)

☐ Disagree (31.2)

Why? _____

THE FOLLOWING QUESTIONS ARE ABOUT YOURSELF AND SOME ASPECT OF YOUR HOUSEHOLD. IN ORDER TO MAKE THE ANALYSIS OF THE PREVIOUS INFORMATION POSSIBLE, PLEASE TICK (✓) ONE BOX WHICH BEST FITS YOUR ANSWER FOR EACH QUESTION.

QUESTIONS ABOUT YOURSELF:

32. How old are you?

☐ Over 17, up to 27 years old (32.1)

☐ Over 27, up to 37 years old (32.2)

☐ Over 37, up to 47 years old (32.3)

☐ Over 47, up to 57 years old (32.4)

☐ Over 57, up to 67 years old (32.5)

☐ Over 67 years old (32.6)

33. Sex

- ☐ Male (33.1)
- ☐ Female (33.2)

34. Marital status

- ☐ Married (34.1)
- ☐ Single (34.2)
- ☐ Widdowed or divorced (34.3)

35. What is your occupation?

- ☐ Self-employed (35.1)
- ☐ Employee (35.2)
- ☐ Unemployed (35.3)
- ☐ Retired (35.4)
- ☐ Student (35.5)
- ☐ Housewife (35.6)

36. Educational status:

(Please tick the last certificate you have received)

- ☐ Cannot read or write (36.1)
- ☐ Can read and write (36.2)
- ☐ Hold a primary certificate (36.3)
- ☐ Hold an intermediate certificate or its equivalence (36.4)
- ☐ Hold a secondary certificate or its equivalent (36.5)
- ☐ Hold a College certificate or its equivalent (36.6)
- ☐ Higher than a College (36.7)

QUESTIONS ABOUT THE HEAD OF THE HOUSEHOLD. IF YOU ARE THE HEAD OF THE HOUSEHOLD, DO NOT ANSWER QUESTION NUMBER 37, 38, and 39.

37. How old is the head of your household?

- ☐ Over 17, up to 27 years old (37.1)
- ☐ Over 27, up to 37 years old (37.2)
- ☐ Over 37, up to 47 years old (37.3)
- ☐ Over 47 years old (37.4)

38. Educational status of the head of the household.
(please tick the last certificate he has received)

- ☐ Cannot read or write (38.1)
- ☐ Can read and write (38.2)
- ☐ Holds a primary certificate (38.3)
- ☐ Holds an intermediate certificate or its equivalent (38.4)
- ☐ Holds a secondary certificate or its equivalent (38.5)
- ☐ Holds a college certificate or its equivalent (38.6)
- ☐ Higher than college (38.7)

39. What is the occupation of the Head of your Household

- ☐ Self-employed (39.1)
- ☐ Employee (39.2)
- ☐ Unemployed (39.3)
- ☐ Retired (39.4)
- ☐ Student (39.5)

GENERAL INFORMATION ABOUT YOUR HOUSEHOLD

40. How many members are there in your household?
(Indicate the number of people who live permanently together
in the household)

- | | | |
|--------------------------|----------------------------|--------|
| <input type="checkbox"/> | Two persons | (40.1) |
| <input type="checkbox"/> | Over 2 and up to 5 persons | (40.2) |
| <input type="checkbox"/> | 6 up to 8 persons | (40.3) |
| <input type="checkbox"/> | 9 persons or more | (40.4) |

41. What kind of house do you live in?

- | | | |
|--------------------------|---|--------|
| <input type="checkbox"/> | Detached house (villa) | (41.1) |
| <input type="checkbox"/> | Apartment | (41.2) |
| <input type="checkbox"/> | Non-detached house (old Al-Medina type house) | (41.3) |
| <input type="checkbox"/> | An ordinary house of brick blocks | (41.4) |
| <input type="checkbox"/> | Other | (41.5) |

42. Do you, or your family own your house or do you
rent it.

- | | | |
|--------------------------|--------------|--------|
| <input type="checkbox"/> | Own house | (42.1) |
| <input type="checkbox"/> | Rented house | (42.2) |
| <input type="checkbox"/> | Others | (42.3) |

12.

43. How much is the total monthly income of your household.

- | | | |
|--------------------------|------------------------------|--------|
| <input type="checkbox"/> | Below 3000 SR a month | (43.1) |
| <input type="checkbox"/> | From 3000 to 4999 SR a month | (43.2) |
| <input type="checkbox"/> | From 5000 to 8999 SR a month | (43.3) |
| <input type="checkbox"/> | 9000 SR or more a month | (43.4) |

YOU HAVE NOW FINISHED THE QUESTIONNAIRE. THANK YOU FOR YOUR HELP.

I hope this questionnaire has given you a chance to express your own views about the recent development of Al-Medina. If there are things which you think important the opposite page is for you to express them.

Your comments will be read carefully.

Please comment on the opposite page.

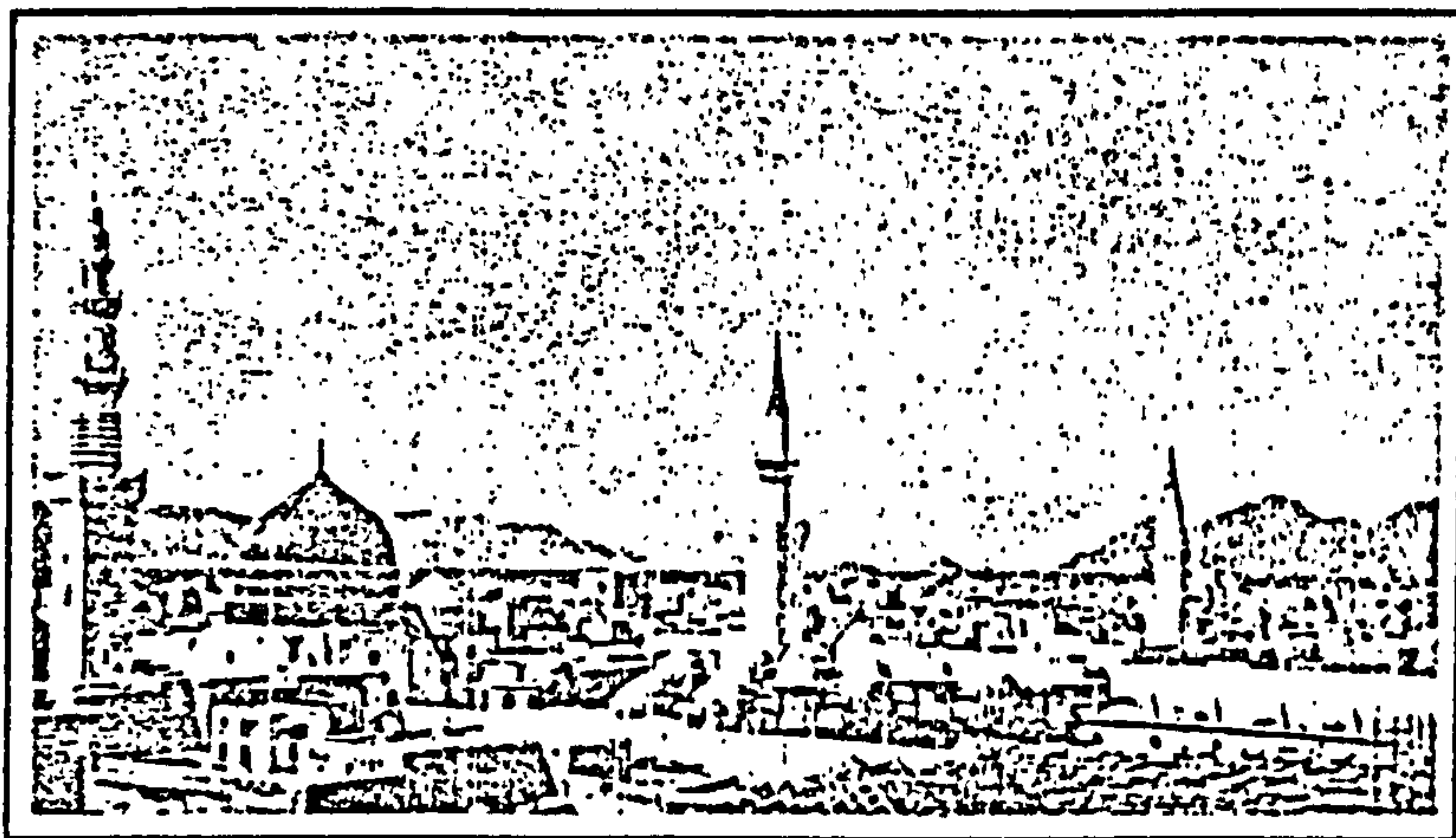
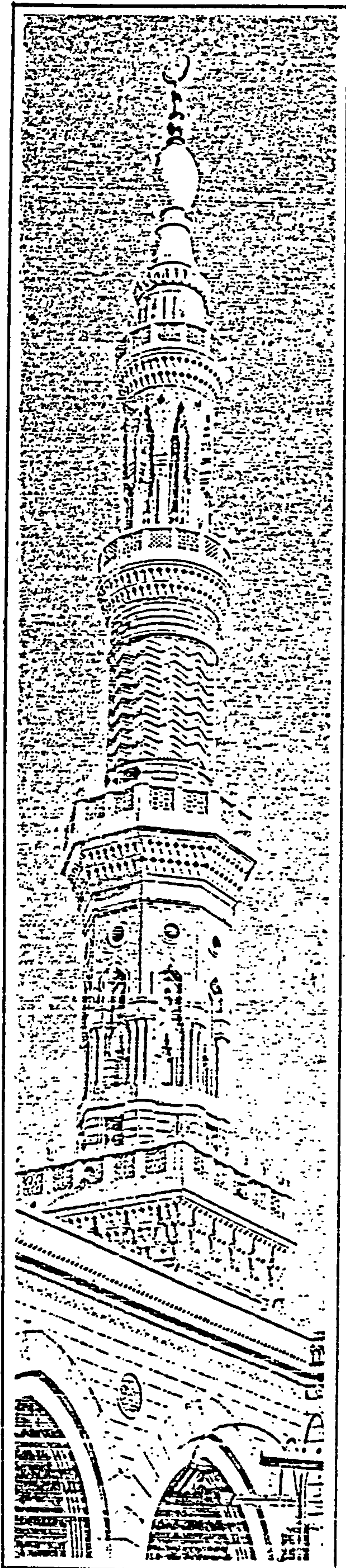
(continue on another page if necessary)

Please return the questionnaire to the school by the same member of your family who brought it.

APPENDIX B

QUESTIONNAIRE OF VISITORS

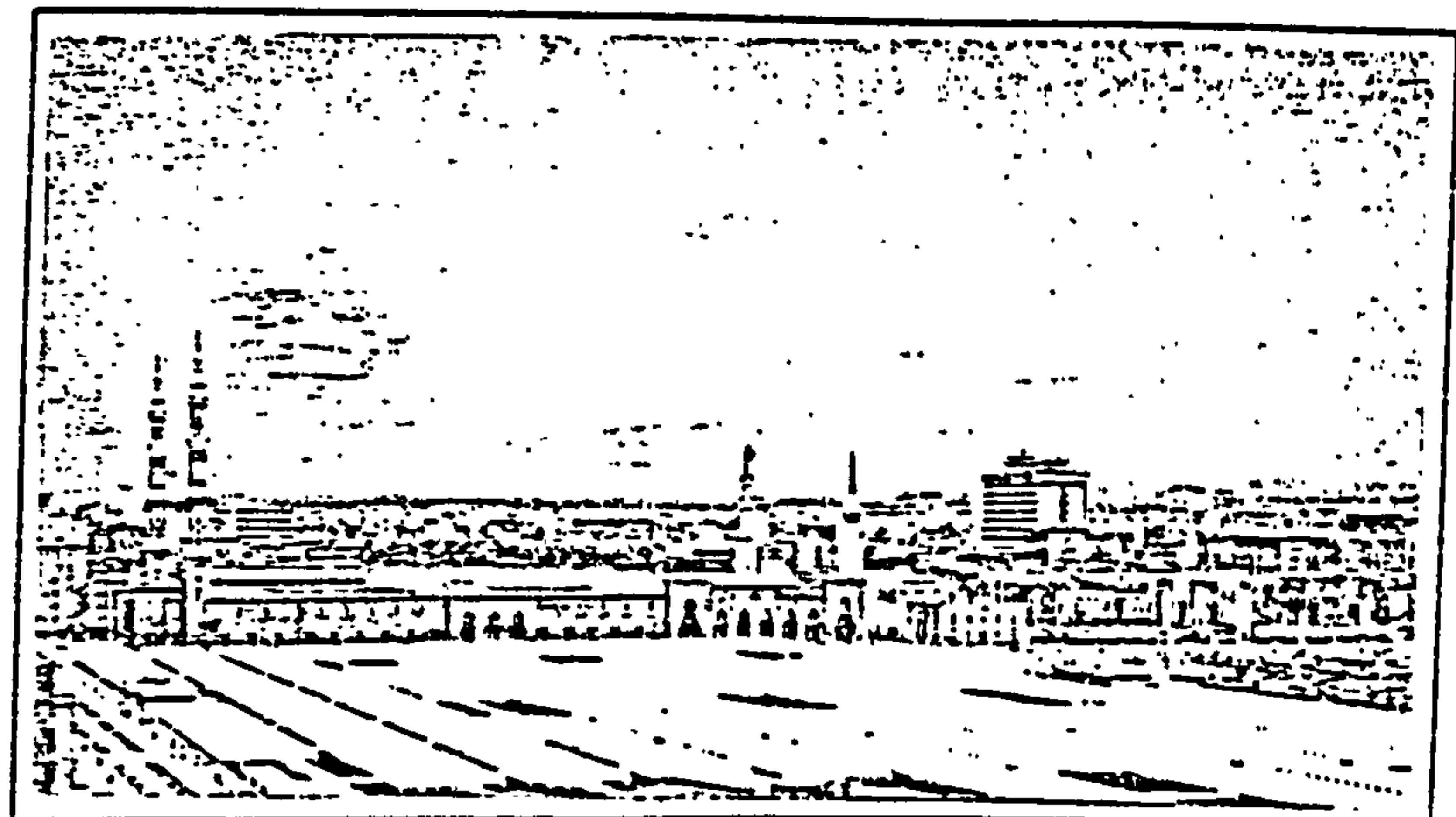
(This questionnaire was carried out in Arabic, English, Turkish, Urdu and Hausa)



VISITORS' QUESTIONNAIRE

AL-MEDINA

AUGUST, 1986.



In the name of God, Most Gracious, Most Merciful.

University of Edinburgh,
Faculty of Social Science,
Department of Architecture.

Dear Visitor of Al-Medina,

This is a survey to find out a few facts about the recent development of the city of Al-Medina in general and the Haram area in particular. It is part of my Ph.D. thesis, which is devoted to the study of the relationship between the Mosque and its physical environment. Hopefully the result of the study will be used to bring maximum benefit to the Holy City.

The questionnaire is sent to you and to a cross-section of visitors throughout Al-Medina to ask you to give your opinion about the city. To make sure that all different points of view are represented in the sample, the questionnaire are sent to men and women in different age groups. I hope you will be willing to co-operate.

Please note that it is your own view that is wanted. Do not ask anyone else to fill in the form for you. If you do not read or write, you can ask a member of your family or a friend to read the questions and record your answers. Your replies will be treated in complete confidence, and no individual can be identified.

The answer does not require any effort on your part other than placing a tick (✓) in the box(s) which best fits your own answer. The figures to the right are merely an aid for the analysis of the result; please ignore them.

When you have completed the questionnaire, please seal up the answers in the provided envelope. Do not write your name or anything else on it in order to ensure the anonymity and confidentiality of the answers. Then hand it back to the same person who delivered it to you.

I hope you will find it interesting and thank you for your co-operation.

Yours faithfully,

Fahad AN-Nwisser Al-Hariqi

Note: The figures between brackets to the right are merely an aid for the analysis of the result; please ignore them.

PLEASE TICK (✓) IN THE BOX WHICH BEST FITS YOUR ANSWER FOR EACH OF THE FOLLOWING QUESTIONS.

1. Did you come to Al-Medina alone or with other members of your family?

☐ I came alone (1.1)

☐ I came with one member of my family (1.2)

☐ I came with two members of my family (1.3)

☐ I came with more than two members of my family (1.4)

2. Where do you live in Al-Medina?

☐ In a hotel (2.1)

☐ Furnished flat (2.2)

☐ With friend or relative (2.3)

☐ Elsewhere (2.4)

3. If you live in a hotel or flat, do you share your room with other people?

☐ No, I do not share my room with anybody else (3.1)

☐ Share with another person (3.2)

☐ Share with two persons (3.3)

☐ Share with three persons (3.4)

☐ Share with more than three people (3.5)

2.

4. How far is your accommodation from the Haram?

- ☐ Less than 500 meters (4.1)
- ☐ From 500 meters to one kilometre (4.2)
- ☐ From 1 to 2 kilometres (4.3)
- ☐ From 2 to 5 kilometres (4.4)
- ☐ Over 5 kilometres (4.5)

5. Do you consider your accommodation near or far from the Haram?

- ☐ Near to the Haram (5.1)
- ☐ Far from the Haram (5.2)
- ☐ In between (5.3)

6. How do you generally get to the Haram?

- ☐ On foot (6.1)
- ☐ By a private car (6.2)
- ☐ By bus (6.3)
- ☐ By a taxi (6.4)
- ☐ Others (6.5)

7. If you get to the Haram by a private car, bus, or taxi, how long does it take you travelling from the Haram to get to your accommodation?

- ☐ Less than 10 minutes (7.1)
- ☐ Between 10 and 20 minutes (7.2)
- ☐ Between 20 and 30 minutes (7.3)
- ☐ Between 30 and 45 minutes (7.4)
- ☐ More than 45 minutes (7.5)

3.

8. How long does it take you walking from the Haram to get to your accommodation?

☐ less than 10 minutes (8.1)

☐ Between 10 and 20 minutes (8.2)

☐ Between 20 and 30 minutes (8.3)

☐ Between 30 and 45 minutes (8.4)

☐ More than 45 minutes (8.5)

☐ Do not know (8.6)

9. Do you think it is easy for visitors to find their way to the Haram, or is it difficult?

☐ It is easy (9.1)

☐ It is difficult (9.2)

10. Is this your first visit to Al-Medina?

☐ Yes, this is my first visit (10.1)

☐ No, this is my second visit (10.2)

☐ No, this is my third visit (10.3)

☐ No, I visited Al-Medina more than three times before (10.4)

IF THIS IS YOUR FIRST VISIT TO AL-MEDINA
PLEASE DO NOT ANSWER QUESTION NUMBERS
11, 12 AND 13.

11. When was your first visit to Al-Medina?

☐ During this year (11.1)

☐ Last year or the year before (11.2)

☐ Between 3 and 5 years ago (11.3)

☐ Between 6 and 16 years ago (11.4)

☐ Before 16 years ago or more (11.5)

12. Do you like Al-Medina more or less now compared with your first visit?

☐ I like it more now (12.1)

☐ I like it less now (12.2)

13. Do you think the recent developments in the central area of Al-Medina have contributed to the spiritual nature of the city or not.

☐ They have contributed (13.1)

☐ They have not (13.2)

14. One usually has an imaginary picture of important places before he has been to them. Do you find Al-Medina similar to the picture which you had in your mind before your arrival to it on the first occasion or is it different?

☐ Al-Medina looks as I imagined it (14.1)

☐ It is different (14.2)

5.

15. If you find Al-Medina different from the picture which you used to have in mind before you arrived there, what do you think best - the imaginary picture or the actual city?

☐ I think the imaginary picture was better (15.1)

☐ I think the actual city is better (15.2)

16. Before your arrival in Al-Medina, did you expect the city to look more historical or more modern?

☐ More historical (16.1)

☐ More modern (16.2)

☐ As it looks now (16.3)

17. Apart from the existence of the Haram in Al-Medina, how do you feel when you are walking or driving in the city centre?

☐ I feel that I am in a Western city (17.1)

☐ I feel that I am in a modern Middle Eastern city (17.2)

☐ I feel that I am in a historical Islamic city (17.3)

18. Apart from the existence of Al-Haram in Al-Medina, do the buildings, the streets and the shops make you feel that you are in Al-Medina, or not

☐ Yes, they make me feel that I am in Al-Medina (18.1)

☐ No, they don't (18.2)

19. Are you in favour or opposed, to high-rise buildings in the Central Area of Al-Medina?

☐ In favour (19.1)

☐ Opposed (19.2)

20. Do you think it is all right for bridges to be built in the Central Area of Al-Medina or not?

☐ It is all right (20.1)

☐ It is not (20.2)

THE FOLLOWING ARE ABOUT SERVICES AND SOME ASPECTS OF AL-MEDINA. FOR THE PURPOSE OF THIS STUDY, IT IS IMPORTANT TO KNOW WHETHER YOU ARE PERSONALLY SATISFIED OR DISSATISFIED WITH EACH ONE OF THEM. PLEASE TICK (✓) THE BOX WHICH BEST FITS YOUR OPINION.

21. "Availability of places for prayer in Al-Haram"

☐ Satisfied (21.1)

☐ Dissatisfied (21.2)

22. "Accommodation"

☐ Satisfied (22.1)

☐ Dissatisfied (22.2)

23. "Transport within the city"

☐ Satisfied (23.1)

☐ Dissatisfied (23.2)

24. "Shopping facilities and restaurants".

☐ Satisfied (24.1)

☐ Dissatisfied (24.2)

25. "Pedestrian walk ways".

☐ Satisfied (25.1)

☐ Dissatisfied (25.2)

26. "The appearance of the city".

☐ Satisfied (26.1)

☐ Dissatisfied (26.2)

THE FOLLOWING QUESTIONS ARE ABOUT YOURSELF, IN ORDER TO MAKE THE ANALYSIS OF THE PREVIOUS INFORMATION POSSIBLE. UNLESS OTHERWISE STATED, PLEASE TICK THE BOX, WHICH BEST FITS YOUR ANSWER.

27. How old are you?

☐ Over 17, up to 27 years old (27.1)

☐ Over 27, up to 37 years old (27.2)

☐ Over 37, up to 47 years old (27.3)

☐ Over 47, up to 57 years old (27.4)

☐ Over 57, up to 67 years old (27.5)

☐ Over 67 years old (27.6)

28. Sex.

☐ Male (28.1)

☐ Female (28.2)

29. Marital status

☐ Married (29.1)

☐ Single (29.2)

☐ Widdowed or divorced (29.3)

30. What is your occupation?

☐ Self-employed (30.1)

☐ Employed (30.2)

☐ Unemployed (30.3)

☐ Retired (30.4)

☐ Student (30.5)

☐ Housewife (30.6)

31. Educational status

(Please tick the last certificate you obtained)

☐ Cannot read or write (31.1)

☐ Can read and write (31.2)

☐ Hold a primary certificate (31.3)

☐ Hold an intermediate certificate or its equivalent (31.4)

☐ Hold a secondary certificate or its equivalent (31.5)

☐ Hold a college certificate or its equivalent (31.6)

☐ Higher than college (31.7)

32. How long do you intend to stay in Al-Medina?

- ☐ One day (32.1)
- ☐ Two or three days (32.2)
- ☐ Four to nine days (32.3)
- ☐ Ten to twenty days (32.4)
- ☐ More than twenty days (32.5)

33. Which of the following prayers did you observe with the Imam of Al-Haram yesterday?

(Please note that in this question only, you can tick more than one box).

- ☐ Fajr (33.1-2)
- ☐ Zuhr (34.1-2)
- ☐ Asr (35.1-2)
- ☐ Maghrib (36.1-2)
- ☐ Isha (37.1-2)
- ☐ I did not observe any of the above prayers with Imam of Al-Haram yesterday (38.1-2)

34. How much do you intend to spend on the purchase of gifts and souvenirs from Al-Medina?

- ☐ Less than 100 SR (39.1)
- ☐ From 100 up to 299 SR (39.2)
- ☐ From 300 up tp 699 SR (39.3)
- ☐ From 700 up to 1499 SR (39.4)
- ☐ 1500 SR or more (39.5)

35. Apart from the purchasing of gifts and souvenirs about how much do you spend in Al-Medina per day. If you are responsible for other people, how much do you spend per person per day?

- ☐ Less than 60 SR per day (40.1)
- ☐ From 60 to 99 SR per day (40.2)
- ☐ From 100 up to 199 SR per day (40.3)
- ☐ From 200 up to 399 SR per day (40.4)
- ☐ 400 SR or more (40.5)

36. What is your nationality?

----- (41.)

37. Where do you live ?

"State the country" ----- (42.)

38. If you live in Saudi Arabia, in which city do you live?

----- (43.)

Please write the date of completion of the questionnaire here. / /

11.

YOU HAVE NOW FINISHED THE QUESTIONNAIRE. THANK YOU FOR YOUR HELP.

I hope this questionnaire has given you a chance to express your own views about the recent development of Al-Medina. If there are things which you think important this page is for you to express them.

Your comments will be read carefully.

Please comment on this page

(continue on the next page if necessary)

APPENDIX C

PRELIMINARY SURVEY OF RESIDENTS

(This survey was carried out in Arabic)

Please write your school name here: _____

Student name: _____

Level of study: _____

Classroom No: _____

How many members are there in your household including yourself?

Please write the members who live permanently in your household (_____)

In the table below, please write the relationship of each over 17 years old member in your household to you, and tick (✓) against it in the column which his or her age falls into. For example, if you have a brother aged 24 years old, write "Brother" and tick against it in the column headed 17 to 27.

(If your age is over 17 years old, write "self" and tick the column which fits in with your age).

MALES							
No	Relation to Informant	over	over	over	over	over	over
		17	27	37	47	57	67
		up to 27	37	47	5	67	
1							
2							
3							
4							
5							
6							
7							
8							

FEMALES							
No	Relation to Informant	over	over	over	over	over	over
		17	27	37	47	57	67
		up to 27	37	47	5	67	
1							
2							
3							
4							
5							
6							
7							
8							

If you have a member(s) of your household, other than yourself in this school, please write her name(s), level of study, and classroom Number.

	Name	Level of Study	Classroom No.
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____

APPENDIX D

FREQUENCY DISTRIBUTION OF THE RESIDENTS' SURVEY VARIABLES

TABLE 1 HOW LONG HAVE YOU BEEN LIVING IN AL-MEDINA ?					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	LESS TH. 1 YEAR	1	3	1.7	1.7 1.7
	1 TO 6 YEARS	2	7	3.8	3.7 5.4
	OVER 6 UP TO 16	3	25	13.6	14.0 19.8
	OVER 16 YEARS	4	143	78.0	80.8 100.0
		9	6	3.2	MISSING
		TOTAL	184	100.0	100.0
	OVALID CASES	178	MISSING CASES	6	

TABLE 2 HOW OFTEN DURING THE OFF-SEASON OF PILGRIMAGE DO YOU OBSERVE THE DAILY PRAYERS IN THE HARAM ?					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	3 OR MORE EV. DAY	1	34	18.3	18.5 18.5
	1 OR 2 EV. DAY	2	26	14.0	14.2 32.7
	2 TO 6 EV. WEEK	3	26	14.3	14.5 47.2
	2 TO 7 EV. MONTH	4	34	18.5	18.7 66.0
	1 OR LESS A MONTH	5	62	33.6	34.0 100.0
		9	2	1.3	MISSING
		TOTAL	184	100.0	100.0
	OVALID CASES	181	MISSING CASES	2	

TABLE 3 HOW OFTEN DURING THE OFF-SEASON OF PILGRIMAGE DO YOU OBSERVE THE FRIDAY PRAYER IN THE HARAM ?					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	EVERY FRIDAY	1	73	39.8	40.6 40.6
	1 EVERY 2 FRIDAYS	2	44	24.1	24.5 65.2
	LESS OFTEN	3	63	34.2	34.8 100.0
		9	4	2.0	MISSING
		TOTAL	184	100.0	100.0
	OVALID CASES	180	MISSING CASES	4	

TABLE 4 HOW OFTEN DURING THE PILGRIMAGE SEASON DO YOU OBSERVE THE DAILY PRAYERS IN THE HARAM ?					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	3 OR MORE EV. DAY	1	23	12.7	13.1 13.1
	1 OR 2 EV. DAY	2	35	19.2	19.9 33.1
	2 TO 6 EV. WEEK	3	19	10.3	10.7 43.7
	2 TO 7 EV. MONTH	4	22	12.1	12.5 56.3
	1 OR LESS EV. MONTH	5	77	42.1	43.7 100.0
		9	7	3.7	MISSING
		TOTAL	184	100.0	100.0
	OVALID CASES	177	MISSING CASES	7	

TABLE 5 HOW OFTEN DURING THE PILGRIMAGE SEASON DO YOU OBSERVE THE FRIDAY PRAYER IN THE HARAM ?					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	EVERY FRIDAY	1	49	26.6	27.4 27.4
	1 EVERY 2 FRIDAYS	2	46	24.8	25.5 52.9
	LESS OFTEN	3	84	45.7	47.1 100.0
		9	6	3.0	MISSING
		TOTAL	184	100.0	100.0
	OVALID CASES	178	MISSING CASES	6	

TABLE 6 HOW FAR IS YOUR HOUSE FROM THE HARAM ?					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	LESS TH. 500 M.	1	20	11.1	11.9 11.9
	500 M. TO 1 KM.	2	31	16.7	17.9 29.8
	FROM 1 TO 2 KM.	3	39	21.1	22.7 52.5
	FROM 2 TO 5 KM.	4	55	29.8	32.1 84.8
	OVER 5 KM.	5	26	14.3	15.4 100.0
		9	13	7.1	MISSING
		TOTAL	184	100.0	100.0
	OVALID CASES	171	MISSING CASES	13	

TABLE 7 DO YOU CONSIDER YOUR HOUSE NEAR OR FAR FROM THE HARAM ?						
VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT	
NEAR TO THE HARAM	1	41	22.5	22.5	22.5	
FAR FROM THE HARAM	2	45	24.2	24.2	46.8	
IN BETWEEN	3	98	53.2	53.2	100.0	
		TOTAL	184	100.0	100.0	
OVALID CASES	184	MISSING CASES	0			

TABLE 8 IF YOU WORK, HOW FAR IS YOUR WORK PLACE FROM THE HARAM ?						
VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT	
LESS TH. 500 M.	1	13	16.9	16.9	16.9	
500 M. TO 1 KM.	2	13	17.4	17.4	34.4	
FROM 1 TO 2 KM.	3	15	20.0	20.0	54.3	
FROM 2 TO 5 KM.	4	17	22.8	22.8	77.1	
OVER 5 KM.	5	17	22.9	22.9	100.0	
		TOTAL	75	100.0	100.0	
OVALID CASES	75	MISSING CASES	0			

TABLE 9 DO YOU OR DOES ANYONE ELSE IN YOUR HOUSEHOLD HAVE A ACAR(S) ?						
VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT	
NO CAR	1	22	11.8	11.8	11.8	
ONE CAR ONLY	2	111	60.1	60.1	72.0	
TWO CARS OR MORE	3	52	28.0	28.0	100.0	
		TOTAL	184	100.0	100.0	
OVALID CASES	184	MISSING CASES	0			

TABLE 10 HOW DO YOU GENERALLY GET TO THE HARAM FOR THE PRAYERS ?						
VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT	
ON FOOT	1	58	31.5	31.5	31.5	
BY PRIVATE CAR	2	104	56.8	57.4	89.2	
BY BUS	3	6	3.2	3.3	92.4	
BY TAXI	4	10	5.5	5.5	98.0	
OTHERS	5	4	2.0	2.0	100.0	
	9	2	1.1	MISSING		
		TOTAL	184	100.0	100.0	
OVALID CASES	182	MISSING CASES	2			

TABLE 11 HOW LONG DOES IT TAKE YOU TRAV. FROM THE HARAM TO GET TO YOUR HOUSE AFTER A FRIDAY PRAYER ?						
VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT	
LESS TH. 10 MIN.	1	26	22.6	22.6	22.6	
BET. 10 & 20 MIN.	2	48	41.6	42.1	64.9	
BET. 20 & 30 MIN.	3	31	27.1	27.4	92.3	
BET. 30 & 45 MIN.	4	4	3.8	3.9	96.2	
MORE TH. 45 MIN.	5	4	3.8	3.8	100.0	
	9	1	1.0	MISSING		
		TOTAL	115	100.0	100.0	
OVALID CASES	114	MISSING CASES	1			

TABLE 12 HOW LONG DOES IT TAKE YOU TRAV. FROM THE HARAM TO GET TO YOUR HOUSE AFTER A DAILY PRAYER ?						
VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT	
LESS TH. 10 MIN.	1	44	38.3	38.3	38.3	
BET. 10 & 20 MIN.	2	45	39.4	39.4	77.6	
BET. 20 & 30 MIN.	3	18	16.0	16.0	93.6	
BET. 30 & 45 MIN.	4	3	2.4	2.4	96.0	
MORE TH. 45 MIN.	5	5	4.0	4.0	100.0	
		TOTAL	115	100.0	100.0	
OVALID CASES	115	MISSING CASES	0			

TABLE 13 IF YOU HAD THE CHOICE TO LIVE IN THE HARAM AREA OR IN THE PERIPHERY, WHAT WOULD YOU CHOOSE ?						
VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT	
IN THE HARAM AREA	1	76	41.3	42.4	42.4	
IN THE PERIPHERY	2	34	18.4	18.8	61.2	
IN BETWEEN	3	70	37.8	38.8	100.0	
	9	5	2.5	MISSING		
		TOTAL	184	100.0	100.0	
OVALID CASES	179	MISSING CASES	5			

TABLE 14 "AL-MEDINA IS NOT THE CITY IT WAS SEVERAL YEARS AGO"						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	AGREE	1	171	93.1	93.1	93.1
	DISAGREE	2	13	6.9	6.9	100.0
		TOTAL	184	100.0	100.0	
	OVALID CASES	184	MISSING CASES	0		

TABLE 15 "ONE FEELS WHEN WALKING OR DRIVING IN SOME AREAS OF AL-MEDINA THAT HE IS IN A DIFFERENT CITY"						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	AGREE	1	87	47.2	48.1	48.1
	DISAGREE	2	94	50.9	51.9	100.0
		9	4	1.9	MISSING	
		TOTAL	184	100.0	100.0	
	OVALID CASES	180	MISSING CASES	4		

TABLE 16 "THE APPEARANCE OF AL-MEDINA WAS BETTER SEVERAL YEARS AGO THAN IT IS TODAY"						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	AGREE	1	89	48.4	48.6	48.6
	DISAGREE	2	94	51.1	51.4	100.0
		9	1	.4	MISSING	
		TOTAL	184	100.0	100.0	
	OVALID CASES	183	MISSING CASES	1		

TABLE 17 "THE RECENT DEVELOPMENT HAVE NOT CONTRIBUTED MUCH TO THE SPIRITUAL NATURE OF THE CITY"						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	AGREE	1	135	73.6	76.5	76.5
	DISAGREE	2	42	22.7	23.8	100.0
		9	7	3.7	MISSING	
		TOTAL	184	100.0	100.0	
	OVALID CASES	177	MISSING CASES	7		

TABLE 18 "HIGH-RISE BUILDINGS SHOUD NO LONGER BE ALLOWED TO BE BUILT IN THE HARAM AREA"						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	AGREE	1	159	86.7	87.1	87.1
	DISAGREE	2	24	12.9	12.9	100.0
		9	1	.4	MISSING	
		TOTAL	184	100.0	100.0	
	OVALID CASES	183	MISSING CASES	1		

TABLE 19 "NEW BUILDINGS SHOUD REFLECT THE TRADITIONAL LOCAL ARCHITECTURE CHARACTER OF THE CITY"						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	AGREE	1	161	87.5	88.1	88.1
	DISAGREE	2	22	11.8	11.9	100.0
		9	1	.6	MISSING	
		TOTAL	184	100.0	100.0	
	OVALID CASES	183	MISSING CASES	1		

TABLE 20 "IT IS EASIER NOW FOR THE VISITORS TO FIND THEIR WAY TO THE HARAM THAN SEVERAL YEARS AGO"						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	AGREE	1	164	89.2	89.2	89.2
	DISAGREE	2	20	10.8	10.8	100.0
		TOTAL	184	100.0	100.0	
	OVALID CASES	184	MISSING CASES	0		

TABLE 21 "BRIDGES HAVE CREATED MORE TRAFFIC PROBLEMS IN THE CENTRAL AREA THAN HAVE BEEN SOLVED"						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	AGREE	1	48	26.2	26.7	26.7
	DISAGREE	2	132	71.9	73.3	100.0
		9	3	1.9	MISSING	
		TOTAL	184	100.0	100.0	
	OVALID CASES	180	MISSING CASES	3		

TABLE 22 "BRIDGES DO NOT FIT IN WITH THE SPIRITUAL AND HISTORICAL NATURE OF AL-MEDINA"						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	AGREE	1	86	46.6	48.1	48.1
	DISAGREE	2	92	50.3	51.9	100.0
		9	6	3.2	MISSING	
		TOTAL	184	100.0	100.0	
	OVALID CASES	178	MISSING CASES	6		

TABLE 23 "BRIDGES SHOULD NOT BE BUILT ANY MORE IN THE CENTRAL AREA OF AL-MEDINA"						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	AGREE	1	71	38.7	40.3	40.3
	DISAGREE	2	108	57.5	59.7	100.0
		9	7	3.8	MISSING	
		TOTAL	184	100.0	100.0	
	OVALID CASES	177	MISSING CASES	7		

TABLE 24 "MORE DIFFICULT NOW FOR ONE TO MAINTAIN CALMNESS & TRANQUILITY WHILE WALKING TO THE HARAM"						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	AGREE	1	154	83.9	84.8	84.8
	DISAGREE	2	28	15.0	15.2	100.0
		9	2	1.1	MISSING	
		TOTAL	184	100.0	100.0	
	OVALID CASES	182	MISSING CASES	2		

TABLE 25 "ALL CARS AND CAR-PARKINGS SHOULD BE KEPT OUTSIDE THE HARAM AREA"						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	AGREE	1	146	79.5	81.0	81.0
	DISAGREE	2	34	18.6	19.0	100.0
		9	3	1.9	MISSING	
		TOTAL	184	100.0	100.0	
	OVALID CASES	180	MISSING CASES	3		

TABLE 26 "SHADED PEDESTRIAN WALK-WAYS ARE ESSENTIAL FOR ENCOURAGING PEOPLE TO WALK TO THE HARAM"						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	AGREE	1	172	93.8	94.4	94.4
	DISAGREE	2	10	5.5	5.6	100.0
		9	1	.7	MISSING	
		TOTAL	184	100.0	100.0	
	OVALID CASES	183	MISSING CASES	1		

TABLE 27 "IMPROVEMENT OF PUBLIC TRANSPORT WILL REDUCE THE TRAFFIC CONGESTION IN THE CENTRAL AREA"						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	AGREE	1	160	86.9	86.9	86.9
	DISAGREE	2	24	13.1	13.1	100.0
		TOTAL	184	100.0	100.0	
	OVALID CASES	184	MISSING CASES	0		

TABLE 28 "AL-MEDINA LACKS TODAY THE OLD STREETS PATTERN AND THE TRADITIONAL COMMERCIAL ACTIVITIES"

0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	AGREE	1	130	71.0	71.4	71.4
	DISAGREE	2	52	28.4	28.6	100.0
		9	1	.7	MISSING	
			-----	-----	-----	
		TOTAL	184	100.0	100.0	
	INVALID CASES	183				
		MISSING CASES	1			

TABLE 29 "SOME OF THE HISTORICAL BUILDINGS WHICH USED TO BE IN ZUNAM AL-TAYAR HAD TO BE CONSERVED"

0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	AGREE	11	115	62.8	84.8	84.8
	DISAGREE	22	63	34.2	35.2	100.0
		99	5	3.0	MISSING	
			-----	-----	-----	
		TOTAL	184	100.0	100.0	
	DVALID CASES	178	MISSING CASES	5		

TABLE 30 "SOME OF THE HISTORICAL BUILDINGS WHICH USED TO BE IN ZUBAK AL-TAYAR HAD TO BE CONSERVED"

0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	AGREE, NO COMMENTS	10	22	11.8	12.2	12.2
	AGREE, CONS.HERITAGE	11	64	34.6	35.7	47.9
	AGREE, REM. PREDECESSORS	12	16	8.9	9.2	57.1
	AGREE, LINK PRESENT PAST	13	6	3.1	3.2	60.3
	AGREE, HARAM EXTENSION	14	4	2.3	2.3	62.7
	AGREE, ITS BEAUTY	16	4	2.0	2.1	64.8
	DISAGREE, NO COMMENTS	20	6	3.2	3.3	68.1
	DISAGREE, HARAM ENLARGEMENT	21	1	.6	.7	68.7
	DISAGREE, EN ST LEAD HARAM	22	11	6.1	6.3	75.1
	DISAGREE, EN ITS OWN STREET	23	4	2.3	2.4	77.4
	DISAGREE, NOT HIS VALUE	24	8	4.4	4.6	82.0
	DISAGREE, DETERIORATING	25	14	7.6	7.8	89.9
	DISAGREE, FOR MODERNITY	26	14	7.8	8.1	97.9
	DISAGREE, OTHER REASONS	29	4	2.0	2.1	100.0
		99	5	3.0	MISSING	
	TOTAL		184	100.0	100.0	
	OVALID CASES	178				
	MISSING CASES		5			

TABLE 31 "BAB AL-MAJIDI IS AN IMPORTANT HISTORICAL AREA AND HAS TO BE CONSERVED"

0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	AGREE	11	102	55.3	56.5	56.5
	DISAGREE	22	78	42.6	43.5	100.0
		99	4	2.0	MISSING	
			----	----	----	
		TOTAL	184	100.0	100.0	
	OVALID CASES	180	MISSING CASES	4		

TABLE 32 "BAB AL-MAJIDI IS AN IMPORTANT HISTORICAL AREA AND HAS TO BE CONSERVED"

0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	AGREE, NO COMMENTS	10	28	15.5	15.8	15.8
	AGREE, CONS.HERITAGE	11	52	28.2	28.8	44.6
	AGREE, REM. PREDECESSORS	12	5	2.8	2.6	47.2
	AGREE, LINK PRESENT PAST	13	2	1.2	1.2	48.4
	AGREE, HARAM EXTENSION	14	12	6.4	6.6	54.9
	AGREE, ITS BEAUTY	16	2	1.1	1.1	56.0
	AGREE, OTHER REASONS	17	1	.4	.4	56.5
	DISAGREE, NO COMMENTS	20	11	5.9	6.0	62.5
	DISAGREE, HARAM ENLARGEMENT	21	12	6.4	6.6	69.1
	DISAGREE, EN ST LEAD HARAM	22	12	6.5	6.6	75.7
	DISAGREE, EN ITS OWN STREET	23	8	4.4	4.5	80.2
	DISAGREE, NOT HIS.VALUE	24	10	5.5	5.6	85.8
	DISAGREE, DETERIORATING	25	10	5.4	5.6	91.4
	DISAGREE, FOR MODERNITY	26	13	7.3	7.5	98.9
	DISAGREE,IT WAS CHANGED	28	1	.4	.4	99.3
	DISAGREE, OTHER REASONS	29	1	.7	.7	100.0
		99	4	2.0	MISSING	
			-----	-----	-----	
	TOTAL		184	100.0	100.0	
0	INVALID CASES	180				
	MISSING CASES		4			

TABLE 33 "AL-AGHWAT'S QUARTER WAS AN IMPORTANT HISTORICAL AREA AND HAD TO BE CONSERVED"

0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	AGREE	11	61	33.5	35.7	35.7
	DISAGREE	22	111	60.2	64.3	100.0
		99	12	6.3	MISSING	
			-----	-----	-----	
		TOTAL	184	100.0	100.0	
	INVALID CASES	172	MISSING CASES	12		

TABLE 34 "AL-AGHWAT'S QUARTER WAS AN IMPORTANT HISTORICAL AREA AND HAD TO BE CONSERVED"

0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	AGREE, NO COMMENTS	10	18	9.7	10.3	10.3
	AGREE, CONS.HERITAGE	11	33	18.0	19.3	29.6
	AGREE, REM. PREDECESSORS	12	7	3.8	3.9	33.4
	AGREE, LINK PRESENT PAST	13	0	.3	.3	33.7
	AGREE, HARAM EXTENSION	14	3	1.5	1.6	35.3
	AGREE, ITS BEAUTY	16	1	.4	.4	35.7
	DISAGREE, NO COMMENTS	20	18	9.8	10.3	46.0
	DISAGREE, HARAM ENLARGEMENT	21	42	22.9	24.4	70.4
	DISAGREE, EN ST LEAD HARAM	22	8	3.5	3.7	74.1
	DISAGREE, EN ITS OWN STREET	23	3	1.7	1.8	76.0
	DISAGREE, NOT HIS.VALUE	24	4	1.9	2.1	78.0
	DISAGREE, DETERIORATING	25	23	12.5	13.4	91.4
	DISAGREE, FOR MODERNITY	26	6	3.2	3.4	94.8
	DISAGREE, SECURITY & SAFETY	27	4	2.4	2.6	97.4
	DISAGREE, OTHER REASONS	29	4	2.4	2.8	100.0
		99	12	6.3	MISSING	
			TOTAL	184	100.0	100.0
OVALID CASES	172		MISSING CASES	12		

TABLE 35 AGE OF THE RESPONDENTS

0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	OV 17 UP TO 27 YEARS	1	56	30.6	33.4	33.4
	OV 27 UP TO 37 YEARS	2	40	21.8	23.8	57.2
	OV 37 UP TO 47 YEARS	3	30	16.3	17.8	75.0
	OV 47 UP TO 57 YEARS	4	19	10.1	11.0	86.0
	OV 57 UP TO 67 YEARS	5	15	8.3	9.1	95.1
	OVER 67 YEARS	6	8	4.5	4.9	100.0
		9	15	8.3	MISSING	
			TOTAL	184	100.0	100.0
OVALID CASES	168		MISSING CASES	15		

TABLE 36 SEX OF THE RESPONDENT

0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	MALE	1	93	50.7	51.5	51.5
	FEMALE	2	88	47.7	48.5	100.0
		9	3	1.6	MISSING	
			TOTAL	184	100.0	100.0
OVALID CASES	181		MISSING CASES	3		

TABLE 37 MARITAL STATUS OF THE RESPONDENT

0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	MARRIED	1	109	59.5	60.9	60.9
	SINGLE	2	59	31.8	32.6	93.5
	WIDOWED OR DIVORCED	3	12	6.4	6.5	100.0
		9	4	2.3	MISSING	
			TOTAL	184	100.0	100.0
OVALID CASES	179		MISSING CASES	4		

TABLE 38 OCCUPATION OF THE RESPONDENTS

0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	SELF-EMPLOYED	1	25	13.6	14.2	14.2
	EMPLOYEE	2	42	22.7	23.7	37.9
	UNEMPLOYED	3	8	4.2	4.4	42.3
	RETIRED	4	8	4.1	4.3	46.6
	STUDENT	5	50	26.9	28.2	74.8
	HOUSEWIFE	6	44	24.1	25.2	100.0
		9	8	4.4	MISSING	
			TOTAL	184	100.0	100.0
OVALID CASES	176		MISSING CASES	8		

TABLE 39 EDUCATIONAL STATUS OF THE RESPONDENTS

0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	CANNOT READ OR WRIT	1	29	15.6	16.2	16.2
	CAN READ & WRITE	2	37	19.9	20.6	36.8
	PRIMARY CERTIFICATE	3	39	21.2	21.9	58.7
	INTER. OR EQUIV.	4	35	18.8	19.5	78.2
	SECONDISAGREE, OR EQUIV.	5	20	11.1	11.5	89.7
	COLLEGE OR EQUIV.	6	13	7.3	7.5	97.3
	HIGH.TH. COLLEGE	7	5	2.7	2.7	100.0
		9	6	3.4	MISSING	
			TOTAL	184	100.0	100.0
OVALID CASES	177		MISSING CASES	6		

TABLE 40 HOW MANY MEMBERS ARE THERE IN YOUR HOUSEHOLD ?						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	TWO PERSONS	1	3	1.9	1.9	1.9
	OV. 2 UP TO 5 PERS.	2	22	11.8	11.9	13.8
	6 UP TO 8 PERSONS	3	66	36.0	36.6	50.4
	9 PERS. OR MORE	4	90	48.9	49.6	100.0
		9	3	1.5	MISSING	
			TOTAL	184	100.0	100.0
OVALID CASES	181		MISSING CASES	3		

TABLE 41 WHAT KIND OF HOUSE DO YOU LIVE IN ?						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	VILLA	1	38	20.8	21.3	21.3
	FLAT	2	60	43.3	44.6	65.8
	OLD MEDINA HOUSE	3	6	3.2	3.3	69.1
	BRICK B. HOUSE	4	51	27.6	28.4	97.4
	OTHER TYPES	5	5	2.5	2.6	100.0
		9	5	2.6	MISSING	
			TOTAL	184	100.0	100.0
OVALID CASES	179		MISSING CASES	5		

TABLE 42 DO YOU, OR YOUR FAMILY OWN YOUR HOUSE OR DO YOU RENT IT ?						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	OWN HOUSE	1	115	62.5	63.7	63.7
	RENTED HOUSE	2	60	32.7	33.4	97.1
	OTHERS	3	5	2.9	2.9	100.0
		9	4	1.9	MISSING	
			TOTAL	184	100.0	100.0
OVALID CASES	180		MISSING CASES	4		

TABLE 43 HOW MUCH IS THE TOTAL MONTHLY INCOME OF YOUR HOUSEHOLD ?						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	BELOW 3000 SR	1	77	41.8	45.3	45.3
	3000 TO 4999 SR	2	46	24.8	26.9	72.1
	5000 TO 8999 SR	3	24	13.0	14.1	86.2
	9000 SR OR MORE	4	23	12.7	13.8	100.0
		9	14	7.6	MISSING	
			TOTAL	184	100.0	100.0
OVALID CASES	170		MISSING CASES	14		

TABLE 44 GEOGRAPHICAL LOCATION OF THE HOUSES						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	THE AREA SERVED BY 3RD. SCHOOL	1	99	54.1	54.1	54.1
	THE AREA SERVED BY 8TH. SCHOOL	2	27	14.6	14.6	68.7
	THE AREA SERVED BY 7TH SCHOOL	3	58	31.3	31.3	100.0
			TOTAL	184	100.0	100.0
OVALID CASES	184		MISSING CASES	0		

TABLE 45 COMMENT WRITING						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	WRITE COMMENTS	1	26	14.2	14.2	14.2
	DO NOT WRITE COMMENTS	2	158	85.8	85.8	100.0
			TOTAL	184	100.0	100.0
OVALID CASES	184		MISSING CASES	0		

FINISH

APPENDIX E

CROSS-TABULATION OF SELECTIVE VARIABLES OF THE RESIDENT'S SURVEY

CROSS TABULATION OF						
TABLE 1	THE TOTAL INCOME OF THE HOUSEHOLDS BY SIZE OF THE HOUSEHOLDS					
0	FSIZE					
	COUNT	I	LESS TH. 6PERSONS		ROW	
	COL PCT	I	16 PERSON	OR MORE	TOTAL	
		I	11	21		
INCG						
	1	I	19	I	104	I
BELOW	5000 SR	I	76.0	I	71.5	I
	2	I	8	I	41	I
5000 SR OR MORE		I	24.0	I	28.5	I
	COLUMN		25		145	170
	TOTAL		14.7		85.3	100.0
ONUMBER OF MISSING OBSERVATIONS =						14

CROSS TABULATION OF						
TABLE 2	TYPE OF THE HOUSES BY SIZE OF THE HOUSEHOLDS					
0	FSIZE					
	COUNT	I	LESS TH. 6PERSONS		ROW	
	COL PCT	I	16 PERSON	OR MORE	TOTAL	
		I	11	21		
HOUG						
	1	I	5	I	33	I
VILLA		I	21.9	I	21.2	I
	2	I	13	I	66	I
FLAT		I	54.9	I	42.8	I
	3	I	6	I	56	I
OTHERS		I	23.2	I	35.9	I
	COLUMN		24		155	179
	TOTAL		13.5		86.5	100.0
ONUMBER OF MISSING OBSERVATIONS =						5

CROSS TABULATION OF						
TABLE 3	EDUCATIONAL LEVELS BY SIZE OF THE HOUSEHOLDS					
0	FSIZE					
	COUNT	I	LESS TH. 6PERSONS		ROW	
	COL PCT	I	16 PERSON	OR MORE	TOTAL	
		I	11	21		
EDUG						
	1	I	12	I	52	I
LOW		I	49.7	I	34.4	I
	2	I	8	I	65	I
MEDIUM		I	32.4	I	43.1	I
	3	I	4	I	34	I
HIGH		I	17.8	I	22.6	I
	COLUMN		25		152	177
	TOTAL		14.1		85.9	100.0
ONUMBER OF MISSING OBSERVATIONS =						7

CROSS TABULATION OF						
TABLE 4	"RECENT DEV. HAVE NOT CONTRIBUTED TO THE SPIRITUALITY OF AL-MEDINA" BY SIZE OF THE HOUSEHOLDS					
0	FSIZE					
	COUNT	I	LESS TH. 6PERSONS		ROW	
	COL PCT	I	16 PERSON	OR MORE	TOTAL	
		I	11	21		
Q17						
	1	I	18	I	116	I
AGREE		I	75.3	I	77.4	I
	2	I	6	I	34	I
DISAGREE		I	24.7	I	22.6	I
	COLUMN		24		150	174
	TOTAL		13.7		86.3	100.0
ONUMBER OF MISSING OBSERVATIONS =						10

CROSS TABULATION OF					BY SEX				
TABLE 5 DAILY PRAYERS OBSERVED IN THE OFF-SEASON									
SEX									
COUNT					ROW				
COL PCT					TOTAL				
SEX									
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CROSS TABULATION OF										
TABLE 9 FRIDAY PRAYERS OBSERVED IN THE OFF-SEASON BY DISTANCES BETWEEN THE HOUSES AND THE HARAM										
Q6										
COUNT		DISTANCE					ROW			
COL PCT		I LESS TH. 500 M. FROM 1 FROM 2 OVER					TOTAL			
		I 500 M. TO 1 KM. TO 2 KM. TO 5 KM. 5 KM.								
		I 1I 2I 3I 4I 5I								
Q3										
1		I 10 I 12 I 16 I 22 I 7 I					67			
EVERY FRIDAY		I 53.3 I 40.4 I 41.5 I 40.9 I 26.4 I					40.0			
2		I 3 I 9 I 15 I 14 I 1 I					43			
1 EVERY 2FRIDAYS		I 18.6 I 31.7 I 39.9 I 25.3 I 4.1 I					25.7			
3		I 5 I 8 I 7 I 18 I 18 I					57			
LESS OFTEN		I 28.1 I 27.8 I 18.6 I 33.8 I 69.6 I					34.2			
COLUMN		18 30 39 54 26					167			
TOTAL		10.9 17.9 23.2 32.4 15.7					100.0			
ONUMBER OF MISSING OBSERVATIONS = 17										

CROSS TABULATION OF										
TABLE 10 THE HOUSES CONSIDERED NEAR OR FAR FROM THE HARAM BY DISTANCES BETWEEN THE HOUSES AND THE HARAM										
Q6										
COUNT		DISTANCE					ROW			
COL PCT		I LESS TH. 500 M. FROM 1 FROM 2 OVER					TOTAL			
		I 500 M. TO 1 KM. TO 2 KM. TO 5 KM. 5 KM.								
		I 1I 2I 3I 4I 5I								
Q7										
1		I 14 I 12 I 7 I 4 I 1 I					38			
NEAR TO HARAM		I 70.5 I 39.8 I 18.1 I 6.7 I 3.0 I					22.2			
2		I 1 I 2 I 3 I 16 I 19 I					40			
FAR FROM HARAM		I 3.4 I 6.5 I 7.6 I 28.3 I 72.1 I					23.5			
3		I 5 I 16 I 29 I 36 I 7 I					93			
IN BETWEEN		I 26.1 I 53.8 I 74.4 I 65.0 I 24.9 I					54.3			
COLUMN		20 31 39 55 26					171			
TOTAL		11.9 17.9 22.7 32.1 15.4					100.0			
NUMBER OF MISSING OBSERVATIONS = 13										

CROSS TABULATION OF									
TABLE 11 "ONE FEELS THAT HE IS IN A DIFFERENT CITY" BY EDUCATIONAL LEVELS									
EDUG									
	COUNT	I						ROW	
	COL	PCT	ILOW		MEDIUM		HIGH		TOTAL
			I		II		2I		3I
Q15									
	1		I	33	I	36	I	14	I
AGREE			I	51.3	I	49.9	I	37.7	I
	2		I	31	I	36	I	24	I
DISAGREE			I	48.7	I	50.1	I	62.3	I
		COLUMN		64		72		38	174
		TOTAL		36.8		41.4		21.8	100.0
ONUMBER OF MISSING OBSERVATIONS = 10									

CROSS TABULATION OF										
TABLE 12 "ONE FEELS THAT HE IS IN A DIFFERENT CITY" BY AGE GROUPS										
AGEG										
COUNT										
COL PCT										ROW
										TOTAL

CROSS TABULATION OF										
TABLE 13 "THE APPEARANCE OF AL-MEDINA WAS BETTER IN THE PAST" BY AGE GROUPS										
AGEG										
COUNT		AGE								ROW TOTAL
COL	PCT	I	OV 17	UP OV 37	UP OV 57					
		I TO 37 Y		TO 57 Y		YEARS				
		I	1I	2I	3I					
Q16	1	I	42	I	22	I	15	I	79	
		I	44.0	I	44.7	I	66.8	I	47.3	
DISAGREE	2	I	54	I	27	I	8	I	88	
		I	56.0	I	55.3	I	33.2	I	52.7	
COLUMN		96		48		23		168		
TOTAL		57.5		28.9		13.6		100.0		
NUMBER OF MISSING OBSERVATIONS = 16										

C R O S S T A B U L A T I O N O F									
TABLE 14 "THE APPEARANCE OF AL-MEDINA WAS BETTER IN THE PAST" BY THE TOTAL INCOME OF THE HOUSEHOLDS									
Q43									
COUNT I									
COL PCT I									
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C R O S S T A B U L A T I O N O F B Y A G E G R O U P S									
TABLE 19 "BRIDGES CREATED MORE TRAFFIC PROBLEMS"									
O									
AGEG									
COUNT I									
COL PCT IOV 17 UP OV 37 UP OV 57									
I TO 37 Y TO 57 Y YEARS									
I 1I 2I 3I									
Q21									
1 I 17 I 17 I 8 I									
AGREE I 18.3 I 35.8 I 34.6 I									
2 I 77 I 30 I 15 I									
DISAGREE I 81.7 I 64.2 I 65.4 I									
COLUMN 95 47 23									
TOTAL 57.5 28.7 13.9									
ONUMBER OF MISSING OBSERVATIONS = 19									

C R O S S T A B U L A T I O N O F B Y M O D E O F T R A N S P O R T (H O U S E T O T H E H A R A M)									
TABLE 20 "BRIDGES CREATED MORE TRAFFIC PROBLEMS"									
O									
TRANS									
COUNT I									
COL PCT ION FOOT NOT ON									
I I FOOT									
I 1I 2I									
Q21									
1 I 17 I 30 I									
AGREE I 29.9 I 25.1 I									
2 I 40 I 91 I									
DISAGREE I 70.1 I 74.9 I									
COLUMN 57 121									
TOTAL 32.0 68.0									
ONUMBER OF MISSING OBSERVATIONS = 5									

C R O S S T A B U L A T I O N O F B Y E D U C A T I O N A L L E V E L S									
TABLE 21 "BRIDGES DO NOT FIT IN WITH THE SPIRITUAL NATURE OF AL-MEDINA"									
O									
EDUG									
COUNT I									
COL PCT ILOW MEDIUM HIGH									
I I									
I 1I 2I 3I									
Q22									
1 I 31 I 40 I 12 I									
AGREE I 52.2 I 53.8 I 31.4 I									
2 I 29 I 34 I 26 I									
DISAGREE I 47.8 I 46.2 I 68.6 I									
COLUMN 60 73 38									
TOTAL 35.1 42.8 22.1									
ONUMBER OF MISSING OBSERVATIONS = 12									

C R O S S T A B U L A T I O N O F B Y A G E G R O U P S									
TABLE 22 "BRIDGES DO NOT FIT IN WITH THE SPIRITUAL NATURE OF AL-MEDINA"									
O									
AGEG									
COUNT I									
COL PCT IOV 17 UP OV 37 UP OV 57									
I TO 37 Y TO 57 Y YEARS									
I 1I 2I 3I									
Q22									
1 I 45 I 21 I 12 I									
AGREE I 48.5 I 44.1 I 52.1 I									
2 I 47 I 26 I 11 I									
DISAGREE I 51.5 I 55.9 I 47.9 I									
COLUMN 92 47 24									
TOTAL 56.6 28.9 14.5									
ONUMBER OF MISSING OBSERVATIONS = 21									

C R O S S T A B U L A T I O N O F B Y M O D E O F T R A N S P O R T									
TABLE 23 "BRIDGES DO NOT FIT IN WITH THE SPIRITUAL NATURE OF AL-MEDINA"									
O									
TRANS									
COUNT I									
COL PCT ION FOOT NOT ON									
I I FOOT									
I 1I 2I									
Q22									
1 I 35 I 51 I									
AGREE I 62.5 I 41.9 I									
2 I 21 I 70 I									
DISAGREE I 37.5 I 58.1 I									
COLUMN 56 121									
TOTAL 31.5 68.5									
ONUMBER OF MISSING OBSERVATIONS = 7									

CROSS TABULATION OF									
TABLE 24 "BRIDGES SHOULD NOT BE BUILT ANY MORE IN THE CENTRAL AREA" BY AGE GROUPS									
O									
AGEG									
COUNT I									
COL PCT IOV 17 UP OV 37 UP OV 57									
I TO 37 Y TO 57 Y YEARS									
I II 2I 3I									
Q23									
AGREE									
DISAGREE									
COLUMN									
TOTAL									
ONUMBER OF MISSING OBSERVATIONS =									

CROSS TABULATION OF									
TABLE 25 "BRIDGES SHOULD NOT BE BUILT ANY MORE IN THE CENTRAL AREA" BY EDUCATIONAL LEVELS									
O									
EDUG									
COUNT I									
COL PCT ILOW MEDIUM HIGH									
I II 2I 3I									
Q23									
AGREE									
DISAGREE									
COLUMN									
TOTAL									
ONUMBER OF MISSING OBSERVATIONS =									

CROSS TABULATION OF									
TABLE 26 "BRIDGES SHOULD NOT BE BUILT ANY MORE IN THE CENTRAL AREA" BY MODE OF TRANSPORT									
O									
TRANS									
COUNT I									
COL PCT ION FOOT NOT ON									
I II 2I									
Q23									
AGREE									
DISAGREE									
COLUMN									
TOTAL									
ONUMBER OF MISSING OBSERVATIONS =									

CROSS TABULATION OF									
TABLE 27 "MAINTAINING CALMNESS IS MORE DIFFICULT NOW" BY AGE GROUPS									
O									
AGEG									
COUNT I									
COL PCT IOV 17 UP OV 37 UP OV 57									
I TO 37 Y TO 57 Y YEARS									
I II 2I 3I									
Q24									
AGREE									
DISAGREE									
COLUMN									
TOTAL									
ONUMBER OF MISSING OBSERVATIONS =									

CROSS TABULATION OF									
TABLE 28 "MAINTAINING CALMNESS IS MORE DIFFICULT NOW" BY EDUCATIONAL LEVELS									
O									
EDUG									
COUNT I									
COL PCT ILOW MEDIUM HIGH									
I II 2I 3I									
Q24									
AGREE									
DISAGREE									
COLUMN									
TOTAL									
ONUMBER OF MISSING OBSERVATIONS =									

C R O S S T A B U L A T I O N O F						
TABLE 29	"MAINTAINING CALMNESS IS MORE DIFFICULT NOW"					BY MODE OF TRANSPORT
Q	TRANS					
	COUNT					
	COL	PCT	ION FOOT	NOT ON		ROW
				FOOT		TOTAL
Q24						
	1		53	99		152
AGREE			92.2	81.1		84.7
	2		5	23		28
DISAGREE			7.8	18.9		15.3
	COLUMN		58	122		180
	TOTAL		32.2	67.8		100.0
NUMBER OF MISSING OBSERVATIONS = 4						

C R O S S T A B U L A T I O N O F						
TABLE 30	"CARS SHOULD BE KEPT OUTSIDE THE HARAM AREA"					BY AGE GROUPS
Q	AGEG					
	COUNT					
	COL	PCT	IOV 17 UP OV 37 UP OV 57			ROW
			TO 37 Y TO 57 Y YEARS			TOTAL
Q25						
	1		78	34	22	134
AGREE			81.9	73.2	94.5	81.2
	2		17	12	1	31
DISAGREE			18.1	26.8	5.5	18.8
	COLUMN		95	47	24	165
	TOTAL		57.5	28.2	14.3	100.0
NUMBER OF MISSING OBSERVATIONS = 19						

C R O S S T A B U L A T I O N O F						
TABLE 31	"CARS SHOULD BE KEPT OUTSIDE THE HARAM AREA"					BY EDUCATIONAL LEVELS
Q	EDUG					
	COUNT					
	COL	PCT	LOW	MEDIUM	HIGH	ROW
						TOTAL
Q25						
	1		54	57	33	143
AGREE			85.4	77.8	85.8	82.3
	2		9	18	5	31
DISAGREE			14.6	22.2	14.2	17.7
	COLUMN		63	73	38	174
	TOTAL		36.4	41.8	21.8	100.0
NUMBER OF MISSING OBSERVATIONS = 10						

C R O S S T A B U L A T I O N O F									
TABLE 32	"CARS SHOULD BE KEPT OUTSIDE THE HARAM AREA"					BY DISTANCE BETWEEN HOUSES AND THE HARAM			
0	Q6								
	COUNT	LESS TH. 500 M.		FROM 1	FROM 2	OVER	ROW		
	COL	PCT	500 M.	TO 1 KM.	TO 2 KM.	TO 5 KM.	5 KM.	TOTAL	
			1	2	3	4	5		
Q25	-----+-----+-----+-----+-----+-----+-----+-----+-----+-----								
	1		19	22	33	41	20		135
AGREE			92.8	75.4	84.6	75.7	76.0		79.8
	-----+-----+-----+-----+-----+-----+-----+-----+-----+-----								
	2		1	7	6	13	8		34
DISAGREE			7.2	24.6	15.4	24.3	24.0		20.2
	-----+-----+-----+-----+-----+-----+-----+-----+-----+-----								
	COLUMN		20	29	39	55	28		189
	TOTAL		12.0	17.2	22.9	32.4	15.5		100.0
NUMBER OF MISSING OBSERVATIONS = 14									

C R O S S T A B U L A T I O N O F						
TABLE 33	"CARS SHOULD BE KEPT OUTSIDE THE HARAM AREA"					BY MODE OF TRANSPORT
Q	TRANS					
	COUNT					
	COL	PCT	ION FOOT	NOT ON		ROW
				FOOT		TOTAL
Q25						
	1		48	96		144
AGREE			85.3	78.7		80.8
	2		8	26		34
DISAGREE			14.7	21.3		19.2
	COLUMN		57	122		178
	TOTAL		31.8	68.2		100.0
NUMBER OF MISSING OBSERVATIONS = 5						

CROSS TABULATION OF									
TABLE 34 "SHADED PEDESTRIAN WALK-WAYS ENCOURAGE WALKING" BY AGE GROUPS									
O									
AGEG									
COUNT I									
COL PCT IOV 17 UP OV 37 UP OV 57									
I TO 37 Y TO 57 Y YEARS									
I 1I 2I 3I									
Q26									
AGREE									
1 I 88 I 46 I 24 I 158									
I 91.3 I 98.3 I 100.0 I 94.5									
DISAGREE									
2 I 8 I 1 I 1 I 9									
I 8.7 I 1.7 I 5.5									
COLUMN									
TOTAL 96 47 24 167									
ONUMBER OF MISSING OBSERVATIONS = 17									

CROSS TABULATION OF									
TABLE 35 "IMPROVMENT OF PUBLIC TRANSPORT REDUCES TRAFFIC CONGESTION" BY EDUCATIONAL LEVELS									
O									
EDUG									
COUNT I									
COL PCT ILOW MEDIUM HIGH									
I 1I 2I 3I									
Q27									
AGREE									
1 I 58 I 64 I 33 I 154									
I 88.5 I 87.1 I 84.1 I 87.0									
DISAGREE									
2 I 8 I 9 I 6 I 23									
I 11.5 I 12.9 I 15.9 I 13.0									
COLUMN									
TOTAL 65 73 39 177									
ONUMBER OF MISSING OBSERVATIONS = 6									

CROSS TABULATION OF									
TABLE 36 "AL-MEDINA TODAY LACKS THE OLD STREETS' PATTERN" BY AGE GROUPS									
O									
AGEG									
COUNT I									
COL PCT IOV 17 UP OV 37 UP OV 57									
I TO 37 Y TO 57 Y YEARS									
I 1I 2I 3I									
Q28									
AGREE									
1 I 64 I 35 I 18 I 118									
I 66.7 I 74.6 I 76.8 I 70.3									
DISAGREE									
2 I 32 I 12 I 5 I 50									
I 33.3 I 25.4 I 23.2 I 29.7									
COLUMN									
TOTAL 96 47 24 167									
ONUMBER OF MISSING OBSERVATIONS = 17									

CROSS TABULATION OF									
TABLE 37 "ZUKAK AL-TAYAR HAD TO BE CONSERVED" BY AGE GROUPS									
O									
AGEG									
COUNT I									
COL PCT IOV 17 UP OV 37 UP OV 57									
I TO 37 Y TO 57 Y YEARS									
I 1I 2I 3I									
ZUQ									
AGREE									
11 I 59 I 30 I 15 I 109									
I 62.6 I 65.7 I 64.4 I 63.7									
DISAGREE									
22 I 35 I 16 I 8 I 60									
I 37.4 I 34.3 I 35.6 I 36.3									
COLUMN									
TOTAL 94 46 24 164									
ONUMBER OF MISSING OBSERVATIONS = 19									

CROSS TABULATION OF									
TABLE 38 "ZUKAK AL-TAYAR HAD TO BE CONSERVED" BY EDUCATIONAL LEVELS									
O									
EDUG									
COUNT I									
COL PCT ILOW MEDIUM HIGH									
I 1I 2I 3I									
ZUQ									
AGREE									
11 I 43 I 49 I 22 I 114									
I 67.3 I 68.5 I 59.7 I 66.2									
DISAGREE									
22 I 21 I 22 I 15 I 58									
I 32.7 I 31.5 I 40.3 I 33.8									
COLUMN									
TOTAL 64 71 37 172									
ONUMBER OF MISSING OBSERVATIONS = 12									

C R O S S T A B U L A T I O N										O F									
TABLE 39 "ZU' AL-TAY R HAD TO BE CONSERVED"										BY THE TOTAL INCOME OF THE HOUSEHOLDS									
Q43																			
COUNT										I									
COL PCT										I									
										I									
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TABLE 44		COMMENT WRITING				CROSS TABULATION BY SEX	
		SEX					
		COUNT	I				
		COL	PCT	MALE	FEMALE	ROW	TOTAL
				I	II	2I	
Q45							
	WRITE	1	I	15	I	11	I
	COMMENTS		I	16.2	I	12.5	I
	DO NOT	2	I	78	I	77	I
	WRITE CO		I	83.8	I	87.5	I
		COLUMN		93		88	181
		TOTAL		51.5		48.5	100.0
NUMBER OF MISSING OBSERVATIONS =						3	

APPENDIX F
FREQUENCY DISTRIBUTION OF THE VISITORS' SURVEY VARIABLES

TABLE 1 DID YOU COME TO AL-MEDINA WITH OTHER MEMBERS OF YOUR FAMILY ?					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	I COME ALONE	1	85	41.5	42.1
	WITH ONE MEMBER	2	54	26.3	68.8
	WITH TWO MEMBERS	3	13	6.3	75.2
	MORE THAN TWO	4	50	24.4	100.0
		9	3	1.5	MISSING
			TOTAL	205	100.0
OVALID CASES	202		MISSING CASES	3	

TABLE 2 WHERE DO YOU LIVE IN AL-MEDINA ?					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	IN A HOTEL	1	88	42.9	44.0
	FURNISHED FLAT	2	94	45.9	47.0
	FRIEND OR RELATIVE	3	3	1.5	1.5
	ELSEWHERE	4	15	7.3	7.5
		9	5	2.4	MISSING
			TOTAL	205	100.0
OVALID CASES	200		MISSING CASES	5	

TABLE 3 IF YOU LIVE IN A HOTEL OR FLAT , DO YUO SHARE YOUR ROOM WITH OTHER PEOPLE ?					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	I DO NOT SHARE	1	18	9.9	9.9
	WITH ONE PERSON	2	34	18.7	28.7
	WITH TWO PERSONS	3	24	13.2	42.0
	WITH 3 PERSONS	4	21	11.5	53.8
	MORE TH.3 PEOPLE	5	84	46.2	100.0
		9	1	.5	MISSING
			TOTAL	182	100.0
OVALID CASES	181		MISSING CASES	1	

TABLE 4 HOW FAR IS YOUR ACCOMMODATION FROM THE HARAM ?					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	LESS TH. 500 M.	1	91	44.4	44.6
	500 M. TO 1 KM.	2	78	38.0	82.8
	FROM 1 TO 2 KM.	3	22	10.7	93.6
	FROM 2 TO 5 KM.	4	11	5.4	99.0
	OVER 5 KM.	5	2	1.0	100.0
		9	1	.5	MISSING
			TOTAL	205	100.0
OVALID CASES	204		MISSING CASES	1	

TABLE 5 DO YOU CONSIDER YOUR ACCOMMODATION NEAR OR FAR FROM THE HARAM ?					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	NEAR TO HARAM	1	151	73.7	74.4
	FAR FROM HARAM	2	11	5.4	79.8
	IN BETWEEN	3	41	20.0	100.0
		9	2	1.0	MISSING
			TOTAL	205	100.0
OVALID CASES	203		MISSING CASES	2	

TABLE 6 HOW DO YOU GENERALLY GET TO THE HARAM ?					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	ON FOOT	1	198	95.6	97.0
	PRIVATE CAR	2	2	1.0	98.0
	BY BUS	3	2	1.0	99.0
	BY A TAXI	4	1	.5	99.5
	OTHERS	5	1	.5	100.0
		9	3	1.5	MISSING
			TOTAL	205	100.0
OVALID CASES	202		MISSING CASES	3	

TABLE 7 TRAVELLING TIME FROM THE HARAM TO ACCOMMODATION (BY A PRIVATE CAR,BUS,OR TAXI)					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	LESS TH. 10 MIN.	1	1	20.0	20.0 20.0
	BET. 10 & 20 MIN.	2	3	60.0	80.0 80.0
	BET. 20 & 30 MIN.	3	1	20.0	100.0 100.0
		TOTAL	5	100.0	100.0
	OVALID CASES	5	MISSING CASES	0	

TABLE 8 WALKING TIME FROM THE HARAM TO ACCOMMODATION					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	LESS TH. 10 MIN.	1	112	57.1	58.3 58.3
	BET. 10 & 20 MIN.	2	66	33.7	92.7 92.7
	BET. 20 & 30 MIN.	3	7	3.6	96.4 96.4
	BET. 30 & 45 MIN.	4	2	1.0	97.4 97.4
	MORE TH. 45 MIN.	5	1	.5	97.9 97.9
	DO NOT KNOW	6	4	2.0	100.0 100.0
		9	4	2.0	MISSING
		TOTAL	196	100.0	100.0
	OVALID CASES	192	MISSING CASES	4	

TABLE 9 DO YOU THINK IT IS EASY FOR VISITORS TO FIND THEIR WAY TO THE HARAM,OR IS IT DIFFICULT?					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	IT IS EASY	1	67	32.7	32.8 32.8
	IT IS DIFFICULT	2	137	66.8	67.2 100.0
		9	1	.5	MISSING
		TOTAL	205	100.0	100.0
	OVALID CASES	204	MISSING CASES	1	

TABLE 10 IS THIS YOUR FIRST VISIT TO AL-MEDINA ?					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	THE FIRST	1	91	44.4	44.8 44.8
	THE SECOND	2	40	19.5	64.5 64.5
	THE THIRD	3	12	5.9	70.4 70.4
	MORE TH.THREE V.	4	60	29.3	100.0 100.0
		9	2	1.0	MISSING
		TOTAL	205	100.0	100.0
	OVALID CASES	203	MISSING CASES	2	

TABLE 11 IF YOU VISITED AL-MEDINA BEFORE,WHEN WAS YOUR FIRST VISIT ?					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	THIS YEAR	1	8	7.1	7.4 7.4
	1 OR TWO Y. AGO	2	14	12.5	20.4 20.4
	BET. 3 & 5 Y.AGO	3	33	29.5	50.9 50.9
	BET.6 & 10 Y.AGO	4	38	33.9	86.1 86.1
	BET. 10 Y. AGO	5	15	13.4	100.0 100.0
		9	4	3.6	MISSING
		TOTAL	112	100.0	100.0
	OVALID CASES	108	MISSING CASES	4	

TABLE 12 DO YOU LIKE AL-MEDINA MORE OR LESS NOW COMPARED WITH YOUR FIRST VISIT ?					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	MORE NOW	1	104	92.9	94.5 94.5
	LESS NOW	2	6	5.4	100.0 100.0
		9	2	1.8	MISSING
		TOTAL	112	100.0	100.0
	OVALID CASES	110	MISSING CASES	2	

TABLE 13 DO YOU THINK THE RECENT DEVELOPMENTS HAVE CONTRIBUTED TO THE SPIRITUAL NATURE OF THE CITY OR NOT?					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	CONTRIBUTED	1	79	70.5	73.1
	HAVE NOT	2	29	25.9	26.9
		9	4	3.6	MISSING
		TOTAL	112	100.0	100.0
OVALID CASES	108	MISSING CASES	4		

TABLE 14 DO YOU FIND AL-MEDINA SIMILAR TO WHAT YOU IMAGINED BEFORE YOUR ARRIVAL TO IT OR IS IT DIFFERENT ?					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	AS I IMAGINED	1	66	32.2	34.0
	IT IS DIFFERENT	2	128	62.4	68.0
		9	11	5.4	MISSING
		TOTAL	205	100.0	100.0
OVALID CASES	194	MISSING CASES	11		

TABLE 15 IF YOU FIND IT DIFFERENT,WHAT DO YOU THINK BEST - THE IMAGINARY PICTURE OR THE ACTUAL CITY ?					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	IMAGINARY WAS BETTER	1	64	50.0	50.4
	REALITY IS BETTER	2	63	49.2	49.6
		9	1	.8	MISSING
		TOTAL	128	100.0	100.0
OVALID CASES	127	MISSING CASES	1		

TABLE 16 BEFORE YOUR ARRIVAL IN AL-MEDINA DO YOU EXPECT IT TO LOOK MORE HISTORICAL OR MORE MODERN ?					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	MORE HISTORICAL	1	148	72.2	73.6
	MORE MODERN	2	36	17.6	17.9
	AS IT LOOKS	3	17	8.3	8.5
		9	4	2.0	MISSING
		TOTAL	205	100.0	100.0
OVALID CASES	201	MISSING CASES	4		

TABLE 17 HOW DO YOU FEEL WHEN YOU ARE WALKING OR DRIVING IN THE CITY CENTER ?					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	WESTERN CITY	1	19	9.3	9.4
	MIDDLE EAST CITY	2	76	37.1	37.6
	ISLAMIC CITY	3	107	52.2	53.0
		9	3	1.5	MISSING
		TOTAL	205	100.0	100.0
OVALID CASES	202	MISSING CASES	3		

TABLE 18 DO THE BUILDINGS ,THE STREETS AND SHOPS MAKE YOU FEEL THAT YOU ARE IN AL- MEDINA OR NOT ?					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	YES THEY DO	1	122	59.5	61.0
	NO THEY DONOT	2	78	38.0	39.0
		9	5	2.4	MISSING
		TOTAL	205	100.0	100.0
OVALID CASES	200	MISSING CASES	5		

TABLE 19 ARE YOU IN FAVOUR OR OPPOSE HIGH-RISE BUILDINGS IN THE CENTRAL AREA ?					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	IN FAVOUR	1	117	57.1	57.9
	OPPOSE	2	85	41.5	42.1
		9	3	1.5	MISSING
		TOTAL	205	100.0	100.0
OVALID CASES	202	MISSING CASES	3		

TABLE 20 DO YOU THINK IT IS ALL RIGHT FOR BRIDGES TO BE BIULT IN THE CENTRAL AREA OR NOT ?						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	ALL RIGHT	1	166	81.0	81.4	81.4
	IT IS NOT	2	38	18.5	18.6	100.0
		9	1	.5	MISSING	
		TOTAL	205	100.0	100.0	
OVALID CASES	204	MISSING CASES	1			

TABLE 21 SATISFACTION WITH AVAILABILITY OF PRAYER PLACES IN THE MARAM						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	SATISFIED	1	125	61.0	61.0	61.0
	DISSATISFIED	2	80	39.0	39.0	100.0
		TOTAL	205	100.0	100.0	
OVALID CASES	205	MISSING CASES	0			

TABLE 22 SATISFACTION WITH ACCOMMODATION						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	SATISFIED	1	143	69.8	70.8	70.8
	DISSATISFIED	2	59	28.8	29.2	100.0
		9	3	1.5	MISSING	
		TOTAL	205	100.0	100.0	
OVALID CASES	202	MISSING CASES	3			

TABLE 23 SATISFACTION WITH TRANSPORT WITHIN THE CITY						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	SATISFIED	1	152	74.1	78.4	78.4
	DISSATISFIED	2	42	20.5	21.6	100.0
		9	11	5.4	MISSING	
		TOTAL	205	100.0	100.0	
OVALID CASES	194	MISSING CASES	11			

TABLE 24 SATISFACTION WITH SHOPPING FACILITIES AND RESTAURANTS						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	SATISFIED	1	121	59.0	59.6	59.6
	DISSATISFIED	2	82	40.0	40.4	100.0
		9	2	1.0	MISSING	
		TOTAL	205	100.0	100.0	
OVALID CASES	203	MISSING CASES	2			

TABLE 25 SATISFACTION WITH PEDESTRIAN WALK WAYS						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	SATISFIED	1	111	54.1	56.1	56.1
	DISSATISFIED	2	87	42.4	43.9	100.0
		9	7	3.4	MISSING	
		TOTAL	205	100.0	100.0	
OVALID CASES	198	MISSING CASES	7			

TABLE 26 SATISFACTION WITH THE APPEARANCE OF THE CITY						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	SATISFIED	1	145	70.7	72.9	72.9
	DISSATISFIED	2	54	26.3	27.1	100.0
		9	6	2.9	MISSING	
		TOTAL	205	100.0	100.0	
OVALID CASES	199	MISSING CASES	6			

TABLE 27 AGE OF THE RESPONDENTS					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	OV 17 UP TO 27 YEARS	1	39	19.0	19.0 19.0
	OV 27 UP TO 37 YEARS	2	67	32.7	32.7 51.7
	OV 37 UP TO 47 YEARS	3	52	25.4	25.4 77.1
	OV 47 UP TO 57 YEARS	4	25	12.2	12.2 89.3
	OV 57 UP TO 67 YEARS	5	21	10.2	10.2 99.5
	OVER 67 YEARS	6	1	.5	.5 100.0
			TOTAL 205	100.0	100.0
	OVALID CASES 205		MISSING CASES 0		

TABLE 28 SEX OF THE RESPONDENTS					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	MALE	1	176	85.9	85.9 85.9
	FEMALE	2	29	14.1	14.1 100.0
			TOTAL 205	100.0	100.0
	OVALID CASES 205		MISSING CASES 0		

TABLE 29 MARITAL STATUS OF THE RESPONDENTS					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	MARRIED	1	180	87.8	89.6 89.6
	SINGLE	2	18	8.8	9.0 98.6
	WIDDED OR DIVORCED	3	3	1.5	1.5 100.0
		9	4	2.0	MISSING
			TOTAL 205	100.0	100.0
	OVALID CASES 201		MISSING CASES 4		

TABLE 30 OCCUPATION OF THE RESPONDENTS					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	SELF-EMPLOYED	1	39	19.0	19.2 19.2
	EMPLOYED	2	122	59.5	60.1 79.3
	UNEMPLOYED	3	3	1.5	1.5 80.8
	RETIRED	4	11	5.4	5.4 86.2
	STUDENT	5	12	5.9	5.9 92.1
	HOUSEWIFE	6	16	7.8	7.9 100.0
		9	2	1.0	MISSING
			TOTAL 205	100.0	100.0
	OVALID CASES 203		MISSING CASES 2		

TABLE 31 EDUCATION STATUS OF THE RESPONDENTS					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	CANNOT READ OR WRIT	1	7	3.4	3.5 3.5
	CAN READ & WRITE	2	19	9.3	9.4 12.9
	PRIMARY CERTIFICATE	3	7	3.4	3.5 16.3
	INTER. CERTIFICATE	4	27	13.2	13.4 29.7
	SECON. CERTIFICATE	5	62	30.2	30.7 60.4
	COLLEGE CRTIFICATE	6	54	26.3	26.7 87.1
	HIGHER TH. COLLEGE	7	26	12.7	12.9 100.0
		9	3	1.5	MISSING
			TOTAL 205	100.0	100.0
	OVALID CASES 202		MISSING CASES 3		

TABLE 32 HOW LONG DO YOU INTEND TO STAY IN AL-MEDINA ?					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	ONE DAY	1	8	3.9	3.9 3.9
	2 OR 3 DAYS	2	22	10.7	10.8 14.7
	4 TO 9 DAYS	3	116	56.6	56.9 71.6
	10 TO 20 DAYS	4	47	22.9	23.0 94.6
	MORE TH. 20 DAYS	5	11	5.4	5.4 100.0
		9	1	.5	MISSING
			TOTAL 205	100.0	100.0
	OVALID CASES 204		MISSING CASES 1		

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TABLE 33 DID YOU OBSERVE FAJR PRAYER YESTERDAY IN THE HARAM ?						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	YES	1	164	80.0	80.4	80.4
	NO	2	40	19.5	19.6	100.0
		9	1	.5	MISSING	
		TOTAL	205	100.0	100.0	
	OVALID CASES	204	MISSING CASES	1		

TABLE 34 DID YOU OBSERVE ZMHR PRAYER YESTERDAY IN THE HARAM ?						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	YES	1	163	79.5	79.9	79.9
	NO	2	41	20.0	20.1	100.0
		9	1	.5	MISSING	
		TOTAL	205	100.0	100.0	
	OVALID CASES	204	MISSING CASES	1		

TABLE 35 DID YOU OBSERVE ASR PRAYER YESTERDAY IN THE HARAM ?						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	YES	1	155	75.6	76.0	76.0
	NO	2	49	23.9	24.0	100.0
		9	1	.5	MISSING	
		TOTAL	205	100.0	100.0	
	OVALID CASES	204	MISSING CASES	1		

TABLE 36 DID YOU OBSERVE MAGHRIB PRAYER YESTERDAY IN THE HARAM ?						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	YES	1	168	82.0	82.4	82.4
	NO	2	36	17.6	17.6	100.0
		9	1	.5	MISSING	
		TOTAL	205	100.0	100.0	
	OVALID CASES	204	MISSING CASES	1		

TABLE 37 DID YOU OBSERVE ISHA PRAYER YESTERDAY IN THE HARAM ?						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	YES	1	168	82.0	82.4	82.4
	NO	2	36	17.6	17.6	100.0
		9	1	.5	MISSING	
		TOTAL	205	100.0	100.0	
	OVALID CASES	204	MISSING CASES	1		

TABLE 38 I DID NOT OBSERVE ANY PRAYER YESTERDAY IN THE HARAM						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	YES	1	14	6.8	6.9	6.9
	NO	2	190	92.7	93.1	100.0
		9	1	.5	MISSING	
		TOTAL	205	100.0	100.0	
	OVALID CASES	204	MISSING CASES	1		

TABLE 39 HOW MUCH DO YOU INTEND TO SPEND ON THE PURCHASE OF GIFTS AND SOUVENIRS FROM AL-MEDINA ?						
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	LESS TH. 100 SR.	1	20	9.8	9.9	9.9
	FROM 100 TO 299 SR.	2	32	15.6	15.8	25.6
	FROM 300 TO 699 SR.	3	50	24.4	24.6	50.2
	FROM 700 TO 1499 SR.	4	40	19.5	19.7	70.0
	1500 SR. OR MORE	5	61	29.8	30.0	100.0
		9	2	1.0	MISSING	
		TOTAL	205	100.0	100.0	
	OVALID CASES	203	MISSING CASES	2		

TABLE 40 APART FROM PURCHASING OF GIFTS AND SOUVENIRS ,ABOUT HOW MUCH DO YOU SPEND IN AL-MEDINA PER DAY?					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	LESS TH. 60 SR.	1	89	43.4	44.1
	FROM 60 TO 99 SR.	2	41	20.0	20.3
	FROM 100 TO 199 SR.	3	42	20.5	20.8
	FROM 200 TO 399 SR.	4	15	7.3	7.4
	400 SR. OR MORE	5	15	7.3	7.4
		9	3	1.5	MISSING
		TOTAL	205	100.0	100.0
OVALID CASES	202	MISSING CASES	3		

TABLE 41 WHAT IS YOUR NATIONALITY ?					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	SAUDI ARABIA	1100	33	16.1	16.2
	LEBANON	2101	1	.5	.5
	PALESTIN	2102	2	1.0	1.0
	SYRIA	2103	7	3.4	3.4
	JORDEN	2104	11	5.4	5.4
	IRAQ	2105	3	1.5	1.5
	KUWAIT	2106	5	2.4	2.5
	QATAR	2107	2	1.0	1.0
	BAHRAIN	2108	7	3.4	3.4
	UNITED ARAB EMIRATES	2109	6	2.9	2.9
	OMAN	2110	3	1.5	1.5
	YEMEN A. R.	2111	2	1.0	1.0
	YEMEN P. D. R.	2112	2	1.0	1.0
	PAKISTAN	2190	21	10.2	10.3
	TURKEY	2191	19	9.3	9.3
	EGYPT	2201	27	13.2	13.2
	LIBYA	2202	1	.5	.5
	TUNISIA	2203	5	2.4	2.5
	ALGERIA	2204	7	3.4	3.4
	MOROCCO	2205	7	3.4	3.4
	SOMALI REPUBLIC	2206	1	.5	.5
	SUDAN	2207	8	3.9	3.9
	NIGERIA	2290	14	6.8	6.9
	THE UNITED KINGDOM	2301	4	2.0	2.0
	U.S.A.	2304	3	1.5	1.5
	CANADA	2305	3	1.5	1.5
		9999	1	.5	MISSING
		TOTAL	205	100.0	100.0
OVALID CASES	204	MISSING CASES	1		

TABLE 42 WHERE DO YOU LIVE ? "STATE THE COUNTRY"					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	SAUDI ARABIA	1100	47	22.9	23.2
	LEBANON	2101	1	.5	.5
	PALESTIN	2102	1	.5	.5
	SYRIA	2103	6	2.9	3.0
	JORDEN	2104	4	2.0	2.0
	IRAQ	2105	3	1.5	1.5
	KUWAIT	2106	15	7.3	7.4
	QATAR	2107	6	2.9	3.0
	BAHRAIN	2108	7	3.4	3.4
	UNITED ARAB EMIRATES	2109	7	3.4	3.4
	OMAN	2110	8	3.9	3.9
	YEMEN A. R.	2111	2	1.0	1.0
	PAKISTAN	2190	16	7.8	7.9
	TURKEY	2191	14	6.8	6.9
	TAIWAN	2193	1	.5	.5
	EGYPT	2201	12	5.9	5.9
	LIBYA	2202	1	.5	.5
	TUNISIA	2203	4	2.0	2.0
	ALGERIA	2204	7	3.4	3.4
	MOROCCO	2205	6	2.9	3.0
	SOMALI REPUBLIC	2206	1	.5	.5
	SUDAN	2207	5	2.4	2.5
	NIGERIA	2290	14	6.8	6.9
	THE UNITED KINGDOM	2301	4	2.0	2.0
	GERMANY	2302	5	2.4	2.5
	U.S.A.	2304	3	1.5	1.5
	CANADA	2305	3	1.5	1.5
		9999	2	1.0	MISSING
		TOTAL	205	100.0	100.0
OVALID CASES	203	MISSING CASES	2		

TABLE 43 IF YOU LIVE IN SAUDI ARABIA, IN WHICH CITY DO YOU LIVE ?					
0	VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT CUM PERCENT
	RIVADH	1	5	10.6	11.1
	JEDDAH	2	10	21.3	22.2
	DAMMAM	3	10	21.3	22.2
	AL HUFUF	4	4	8.5	8.9
	ANAIZA	5	3	6.4	6.7
	JAIZAN	6	5	10.6	11.1
	TAIF	7	4	8.5	8.9
	OTHER CITIES	8	4	8.5	8.9
		9	2	4.3	MISSING
		TOTAL	47	100.0	100.0
OVALID CASES	45	MISSING CASES	2		

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APPENDIX G

CROSS-TABULATION OF SELECTIVE VARIABLES OF THE VISITORS' SURVEY

CROSS TABULATION OF										
TABLE 1	WHERE DO YOU LIVE IN AL-MEDINA					BY	DO YOU SHARE YOUR ROOM WITH OTHER PEOPLE			
0	Q3									
	COUNT	I	I DO NOT WITH ONE WITH TWO WITH 3 MORE TH.					ROW		
	COL PCT	I I SHARE	II PERSON	2I PERSONS	3I PERSONS	4I 3 PEOPLE	5I	TOTAL		
Q2		I	II	2I	3I	4I	5I			
IN	A HOTEL	1	I 15	I 28	I 16	I 14	I 15	I 88		
			I 83.3	I 82.4	I 66.7	I 66.7	I 17.9	I 48.6		
FURNISHED FLAT	2	I 3	I 6	I 8	I 7	I 69	I 93			
		I 16.7	I 17.6	I 33.3	I 33.3	I 82.1	I 51.4			
COLUMN		18	34	24	21	84	181			
TOTAL		9.9	18.8	13.3	11.6	46.4	100.0			
ONUMBER OF MISSING OBSERVATIONS =		0								

CROSS TABULATION OF															
TABLE 2		IS THIS YOUR FIRST VISIT TO AL-MEDINA BY REGIONS IN WHICH THE RESPONDENTS RESIDE													
LIV															
		COUNT													
		COL PCT	ISAUDI ARABIA	ARAB OF ASIA	OF EX	NON ARAB OF ASIA	ARAB OF AFRICA	NON-ARAB OF AFRI	EUROPE, AMAR.&AU	ROW TOTAL					
			I	II	2I	3I	4I	5I	6I						
Q10			-----												

THE FIRST	1	I	8	I	31	I	23	I	14	I	5	I	8	I	89
			I	17.0	I	51.7	I	76.7	I	38.9	I	35.7	I	57.1	I

THE SECOND	2	I	10	I	11	I	5	I	7	I	4	I	3	I	40
			I	21.3	I	18.3	I	16.7	I	19.4	I	28.6	I	21.4	I

THE THIRD	3	I	4	I	3	I		I	4	I		I	1	I	12
			I	8.5	I	5.0	I		I	11.1	I		I	7.1	I

MORE TH. THREE V.	4	I	25	I	15	I	2	I	11	I	5	I	2	I	60
			I	53.2	I	25.0	I	6.7	I	30.6	I	35.7	I	14.3	I

		COLUMN	47	60	30	38	14	14	201						
		TOTAL	23.4	29.9	14.9	17.9	7.0	7.0	100.0						
ONUMBER OF MISSING OBSERVATIONS = 4															

CROSS TABULATION OF									
TABLE 3		DID YOU OBSERVE FAJR PRAYER YESTERDAY IN THE HARAM					BY SEX		
0		Q28							
		COUNT	I	FEMALE		ROW			
		COL PCT	I			TOTAL			
			I	II	2I				
Q33									
YES	1	I	145	I	19	I	164		
		I	82.9	I	65.5	I	80.4		
NO	2	I	30	I	10	I	40		
		I	17.1	I	34.5	I	19.6		
		COLUMN	175	29	204				
		TOTAL	85.8	14.2	100.0				
ONUMBER OF MISSING OBSERVATIONS =		;							

CROSS TABULATION OF									
TABLE 4		DO YOU CONSIDER YOUR ACCOM. NEAR OR FAR				BY		HOW FAR IS YOUR ACCOM. FROM THE HARAM	
Q4									
		COUNT					ROW		
		COL PCT	I LESS TH. 500 M.	FROM 1	FROM 2	OVER	TOTAL		
			I 500 M. TO 1 KM.	TO 2 KM.	TO 5 KM.	5 KM.			
			I	1I	2I	3I	4I	5I	
Q5		-----+-----							

CROSS TABULATION OF									
TABLE 5		AL-MEDINA AS YOU IMAGINED OR DIFFERENT				BY EDUCATIONAL LEVELS			
0		EDUG							
		COUNT	I	MEDIUM		HIGH	ROW		
		COL PCT	ILOW				TOTAL		
			I	1I	2I	3I			
Q14									
		1	I	13	I	12	I	40	I
AS I	IMAGINED	I	52.0	I	38.7	I	29.6	I	65
		2	I	12	I	19	I	95	I
IT IS	DIFFEREN	I	48.0	I	61.3	I	70.4	I	126
		COLUMN	25	31	135	191			
		TOTAL	13.1	16.2	70.7	100.0			
ONUMBER OF MISSING OBSERVATIONS =			14						

----- C R O S S T A B U L A T I O N O F -----
TABLE 6 IMAGINARY PICTURE WAS THE BEST OR REALITY BY EDUCATIONAL LEVELS

0 EDUG

	COL	PCT	ILOW	MEDIUM	HIGH	ROW
	I	II	2I	3I	TOTAL	
Q15						
1	I	4	I	10	I	49
IMAGINARY WAS BE	I	33.3	I	55.6	I	51.6
2	I	8	I	8	I	46
REALITY IS BETTE	I	66.7	I	44.4	I	48.4
COLUMN		12		18		95
TOTAL		9.6		14.4		76.0
ONUMBER OF MISSING OBSERVATIONS =				3		100.0

----- C R O S S T A B U L A T I O N O F -----
TABLE 7 DO YOU EXPECT IT TO LOOK MORE HISTORICAL BY AGE GROUPS

0 AGE

	COUNT	COL	PCT	I	OV	17	UP	OV	37	UP	OVER	57	ROW
				I	TO	37	Y	TO	57	Y	YEARS		TOTAL
				I	II	2I	3I						
Q16													
1	I	79	I	53	I	16	I						148
MORE HISTORI	I	77.5	I	68.8	I	72.7	I						73.6
2	I	17	I	14	I	5	I						36
MORE MODERN	I	16.7	I	18.2	I	22.7	I						17.9
3	I	6	I	10	I	1	I						17
AS IT LOOKS	I	5.9	I	13.0	I	4.5	I						8.5
COLUMN		102		77		22							201
TOTAL		50.7		38.3		10.9							100.0
ONUMBER OF MISSING OBSERVATIONS =				4									

----- C R O S S T A B U L A T I O N O F -----
TABLE 8 FEELING WHEN WALKING IN THE CITY CENTER BY AGE GROUPS

0 AGE

	COUNT	COL	PCT	I	OV	17	UP	OV	37	UP	OVER	57	ROW
				I	TO	37	Y	TO	57	Y	YEARS		TOTAL
				I	II	2I	3I						
Q17													
1	I	8	I	8	I	3	I						19
WESTERN CITY	I	7.6	I	10.7	I	13.6	I						9.4
2	I	44	I	27	I	5	I						76
MIDDLE EAST CIT	I	41.9	I	38.0	I	22.7	I						37.6
3	I	53	I	40	I	14	I						107
ISLAMIC CITY	I	50.5	I	53.3	I	63.6	I						53.0
COLUMN		105		75		22							202
TOTAL		52.0		37.1		10.9							100.0
ONUMBER OF MISSING OBSERVATIONS =				3									

----- C R O S S T A B U L A T I O N O F -----
TABLE 9 FEELING WHEN WALKING IN THE CITY CENTER BY EDUCATIONAL LEVELS

0 EDUG

		COUNT				ROW	
		COL	PCT	ILOW	MEDIUM	HIGH	TOTAL
		I		I		I	
		I		II		2I	
		I				3I	
Q17		-----					
	1	I	1	I	1	I	17
WESTERN CITY		I	4.0	I	2.9	I	12.1

	2	I	10	I	9	I	56
MIDDLE EAST CIT		I	40.0	I	26.5	I	40.0

	3	I	14	I	24	I	67
ISLAMIC CITY		I	56.0	I	70.6	I	47.9

		COLUMN		25		34	
		TOTAL		12.6		17.1	
ONUMBER OF MISSING OBSERVATIONS =						6	
						70.4	100.0

----- C R O S S T A B U L A T I O N O F -----
TABLE 10 DO BUILDINGS, STREETS AND SHOPS MAKE FEEL THE CITY BY AGE GROUPS

0 AGE

	COUNT	COL	PCT	I	OV	17	UP	OV	37	UP	OVER	57	ROW
				I	TO	37	Y	TO	57	Y	YEARS		TOTAL
				I	II	2I	3I						
Q18													
1	I	60	I	50	I	12	I						122
YES THEY DO	I	57.7	I	67.6	I	54.5	I						61.0
2	I	44	I	24	I	10	I						78
NO THEY DONOT	I	42.3	I	32.4	I	45.5	I						39.0
COLUMN		104		74		22							200
TOTAL		52.0		37.0		11.0							100.0
ONUMBER OF MISSING OBSERVATIONS =				5									

CROSS TABULATION OF									
TABLE 11	DO BUILDINGS,STREETS AND SHOPS MAKE FEEL THE CITY						BY	EDUCATIONAL LEVELS	
0	EDUG								
	COUNT	I							
	COL	PCT	ILOW	MEDIUM	HIGH				ROW
			I	1I	2I	3I			TOTAL
Q18									
	1	I	20	I	29	I	71	I	120
YES THEY DO		I	87.0	I	85.3	I	50.7	I	60.9
	2	I	3	I	5	I	69	I	77
NO THEY DONOT		I	13.0	I	14.7	I	49.3	I	39.1
	COLUMN		23	34	140				197
	TOTAL		11.7	17.3	71.1				100.0
ONUMBER OF MISSING OBSERVATIONS = 8									

CROSS TABULATION OF										
TABLE 12		IN FAVOUR OR OPPOSE HIGH-RISE BUILDINGS IN THE CENTRAL AREA						BY	AGE GROUPS	
0		AGEG								
		COUNT	I							
		COL PCT	IOV 17 UP OV 37 UP OVER 57					ROW		
			I TO 37 Y TO 57 Y YEARS	I	1I	2I	3I	TOTAL		
Q19		-----+-----+-----+-----+-----+-----+-----+-----+-----+-----								
IN	FAVOUR	1	I	58	I	47	I	12	I	117
			I	56.3	I	61.0	I	54.5	I	57.9
		-----+-----+-----+-----+-----+-----+-----+-----+-----+-----								
OPPOSE		2	I	45	I	30	I	10	I	85
			I	43.7	I	39.0	I	45.5	I	42.1
		-----+-----+-----+-----+-----+-----+-----+-----+-----+-----								
		COLUMN	103		77		22		202	
		TOTAL	51.0		38.1		10.9		100.0	
ONUMBER OF MISSING OBSERVATIONS = 3										

CROSS TABULATION OF										
TABLE 13	IN FAVOUR OR OPPOSE HIGH-RISE BUILDINGS IN THE CENTRAL AREA						BY	EDUCATIONAL LEVELS		
0	EDUG									
	COUNT	I								
	COL	PCT	ILOW	MEDIUM	HIGH				ROW	
			I	1I	2I	3I			TOTAL	
Q19										
IN	FAVOUR	1	I	20	I	24	I	70	I	114
			I	80.0	I	70.6	I	50.0	I	57.3
OPPOSE		2	I	5	I	10	I	70	I	85
			I	20.0	I	29.4	I	50.0	I	42.7
COLUMN			25	34	140				199	
TOTAL			12.6	17.1	70.4				100.0	
NUMBER OF MISSING OBSERVATIONS = 6										

CROSS TABULATION OF										
TABLE 14	ALL RIGHT FOR BRIDGES TO BE BIULT IN THE CENTRAL AREA						BY	AGE GROUPS		
0	AGEG									
	COUNT	I								
	COL	PCT	IOV 17 UP OV 37 UP OVER 57					ROW		
			I TO 37 Y TO 57 Y YEARS	I	1I	2I	3I	TOTAL		
Q20	-----+-----+-----+-----+-----+-----+-----+-----+-----									
ALL	RIGHT	1	I	85	I	62	I	19	I	166
		I	81.0	I	80.5	I	86.4	I	81.4	
IT IS	NOT	2	I	20	I	15	I	3	I	38
		I	19.0	I	19.5	I	13.6	I	18.6	
+-----+-----+-----+-----+-----+-----+-----+-----+-----										
COLUMN			105	77	22				204	
TOTAL			51.5	37.7	10.8				100.0	
ONUMBER OF MISSING OBSERVATIONS = 1										

CROSS TABULATION OF									
TABLE 15		ALL RIGHT FOR BRIDGES TO BE BIULT IN THE CENTRAL AREA						BY	EDUCATIONAL LEVELS
0									
		EDUG							
		COUNT	I						ROW
		COL	PCT	ILOW	MEDIUM	HIGH			TOTAL
				I	1I	2I	3I		
Q20									
		1	I	25	I	29	I	109	I
ALL	RIGHT		I	96.2	I	85.3	I	77.3	I
									81.1
		2	I	1	I	5	I	32	I
IT IS	NOT		I	3.8	I	14.7	I	22.7	I
									18.9
		COLUMN		26	34	141			201
		TOTAL		12.9	16.9	70.1			100.0
ONUMBER OF MISSING OBSERVATIONS = 4									

C R O S S T A B U L A T I O N O F									
TABLE 16	SATISFACTION WITH ACCOMMODATION							BY	AGE GROUPS
0	AGEG								
	COUNT	I	IOV	17 UP	OV	37 UP	OVER	57	ROW
	COL PCT	I	I TO 37 Y		TO 57 Y		YEARS		TOTAL
		I	1I		2I		3I		
Q22									
	1	I	75	I	50	I	18	I	143
SATISFIED		I	72.1	I	65.8	I	81.8	I	70.8
	2	I	29	I	26	I	4	I	59
DISSATISFIED		I	27.9	I	34.2	I	18.2	I	29.2
	COLUMN		104		76		22		202
	TOTAL		51.5		37.6		10.9		100.0
NUMBER OF MISSING OBSERVATIONS = 3									

C R O S S T A B U L A T I O N O F									
TABLE 17	SATISFACTION WITH TRANSPORT WITHIN THE CITY							BY	EDUCATIONAL LEVELS
0	EDUG								
	COUNT	I	ILOW	MEDIUM	HIGH				ROW
	COL PCT	I							TOTAL
		I	1I		2I		3I		
Q23									
	1	I	19	I	29	I	101	I	149
SATISFIED		I	82.6	I	90.6	I	74.3	I	78.0
	2	I	4	I	3	I	35	I	42
DISSATISFIED		I	17.4	I	9.4	I	25.7	I	22.0
	COLUMN		23		32		136		191
	TOTAL		12.0		16.8		71.2		100.0
NUMBER OF MISSING OBSERVATIONS = 14									

C R O S S T A B U L A T I O N O F									
TABLE 18	SATISFACTION WITH SHOPPING FACILITIES AND RESTAURANTS							BY	AGE GROUPS
0	AGEG								
	COUNT	I	IOV	17 UP	OV	37 UP	OVER	57	ROW
	COL PCT	I	I TO 37 Y		TO 57 Y		YEARS		TOTAL
		I	1I		2I		3I		
	1	I	64	I	44	I	13	I	121
SATISFIED		I	60.4	I	58.7	I	59.1	I	59.8
	2	I	42	I	31	I	9	I	82
DISSATISFIED		I	39.6	I	41.3	I	40.9	I	40.4
	COLUMN		106		75		22		203
	TOTAL		52.2		36.9		10.8		100.0
NUMBER OF MISSING OBSERVATIONS = 2									

C R O S S T A B U L A T I O N O F									
TABLE 19	SATISFACTION WITH SHOPPING FACILITIES AND RESTAURANTS							BY	EDUCATIONAL LEVELS
0	EDUG								
	COUNT	I	ILOW	MEDIUM	HIGH				ROW
	COL PCT	I							TOTAL
		I	1I		2I		3I		
Q24									
	1	I	21	I	18	I	81	I	120
SATISFIED		I	80.8	I	54.5	I	57.4	I	60.0
	2	I	5	I	15	I	60	I	80
DISSATISFIED		I	19.2	I	45.5	I	42.6	I	40.0
	COLUMN		26		33		141		200
	TOTAL		13.0		16.5		70.5		100.0
NUMBER OF MISSING OBSERVATIONS = 5									

C R O S S T A B U L A T I O N O F									
TABLE 20	SATISFACTION WITH PEDESTRIAN WALK WAYS							BY	AGE GROUPS
0	AGEG								
	COUNT	I	IOV	17 UP	OV	37 UP	OVER	57	ROW
	COL PCT	I	I TO 37 Y		TO 57 Y		YEARS		TOTAL
		I	1I		2I		3I		
Q25									
	1	I	59	I	38	I	14	I	111
SATISFIED		I	57.3	I	52.1	I	63.6	I	56.1
	2	I	44	I	35	I	8	I	87
DISSATISFIED		I	42.7	I	47.9	I	36.4	I	43.9
	COLUMN		103		73		22		198
	TOTAL		52.0		36.9		11.1		100.0
NUMBER OF MISSING OBSERVATIONS = 7									

CROSS TABULATION OF									
TABLE 21	SATISFACTION WITH PEDESTRIAN WALK WAYS							BY	EDUCATIONAL LEVELS
0	EDUG								
	COUNT	I				ROW			
	COL PCT	ILOW	MEDIUM			TOTAL			
		I	II	2I	3I				
Q25		I							
	1	I	16	I	26	I	69	I	111
SATISFIED		I	66.7	I	81.3	I	49.3	I	56.6
	2	I	8	I	6	I	71	I	85
DISSATISFIED		I	33.3	I	18.8	I	50.7	I	43.4
	COLUMN		24		32		140		196
	TOTAL		12.2		16.3		71.4		100.0
NUMBER OF MISSING OBSERVATIONS = 9									

CROSS TABULATION OF									
TABLE 22	SATISFACTION WITH THE APPEARANCE OF THE CITY							BY	AGE GROUPS
0	AGEG								
	COUNT	I					ROW		
	COL PCT	IOV 17 UP OV 37 UP OVER 57					TOTAL		
		I TO 37 Y TO 57 Y YEARS	II	2I	3I				
Q26		I							
	1	I	72	I	57	I	16	I	145
SATISFIED		I	69.2	I	78.1	I	72.7	I	72.9
	2	I	32	I	16	I	6	I	54
DISSATISFIED		I	30.8	I	21.9	I	27.3	I	27.1
	COLUMN		104		73		22		199
	TOTAL		52.3		36.7		11.1		100.0
NUMBER OF MISSING OBSERVATIONS = 6									

CROSS TABULATION OF									
TABLE 23	SATISFACTION WITH THE APPEARANCE OF THE CITY							BY	EDUCATIONAL LEVELS
0	EDUG								
	COUNT	I				ROW			
	COL PCT	ILOW	MEDIUM			TOTAL			
		I	II	2I	3I				
Q26		I							
	1	I	24	I	31	I	88	I	143
SATISFIED		I	96.0	I	96.9	I	63.3	I	73.0
	2	I	1	I	1	I	51	I	53
DISSATISFIED		I	4.0	I	3.1	I	36.7	I	27.0
	COLUMN		25		32		139		196
	TOTAL		12.8		16.3		70.9		100.0
NUMBER OF MISSING OBSERVATIONS = 9									

CROSS TABULATION OF									
TABLE 24	COMMENT WRITING							BY	AGE GROUPS
0	AGEG								
	COUNT	I							ROW
	COL PCT	IOV 17 UP OV 37 UP OVER 57							TOTAL
		I TO 37 Y TO 57 Y YEARS							
		I	II	2I	3I				
Q44		-----+							

CROSS TABULATION OF									
TABLE 25	COMMENT WRITING							BY	EDUCATIONAL LEVELS
0	EDUG								
	COUNT	I				ROW			
	COL PCT	ILOW	MEDIUM			TOTAL			
		I	II	2I	3I				
Q44		I							
	1	I	8	I	20	I	84	I	112
WRITE COMMENTS		I	30.8	I	58.8	I	59.2	I	55.4
	2	I	18	I	14	I	58	I	90
DO NOT WRITE		I	69.2	I	41.2	I	40.8	I	44.6
	COLUMN		26		34		142		202
	TOTAL		12.9		16.8		70.3		100.0
NUMBER OF MISSING OBSERVATIONS = 3									

FINISH

APPENDIX H

CALCULATION OF THE AVERAGE HOUSEHOLD SIZE OF THE RESIDENTS' SURVEY
SAMPLE

Because the data is grouped in four classes, i.e. two persons; over 2 up to 5 person; 6 to 8 persons; and 9 persons or more, it can be assumed that within the second and third groups the arithmetic mean value of the observation is at the class midpoint, and the open-ended (the fourth) class interval is the same length as the second and the third classes. Then, the arithmetic mean can be found by substituting the values in the following formula:

$$X = \frac{\sum fx}{\sum f}$$

X : refers to the arithmetic mean
f : is the number of households
x : stands for the average household size for each class

It is best to set out the calculation in the form of a table, as shown below.

By substituting the formula above, it is found that the average size of the household in the sample is $1456 \div 181$, that is, 8.04 (approximately eight) persons.

Table: Frequency distribution of household sizes and the total number of their members.

Household Size	Midpoint of Class X	Number of Household (frequency) f	Number of Members fx
Two persons	2	3	6
Over 2 up to 5	4	22	88
6 to 8	7	66	462
9 persons or more	10	90	900
Total	-	181	1456

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